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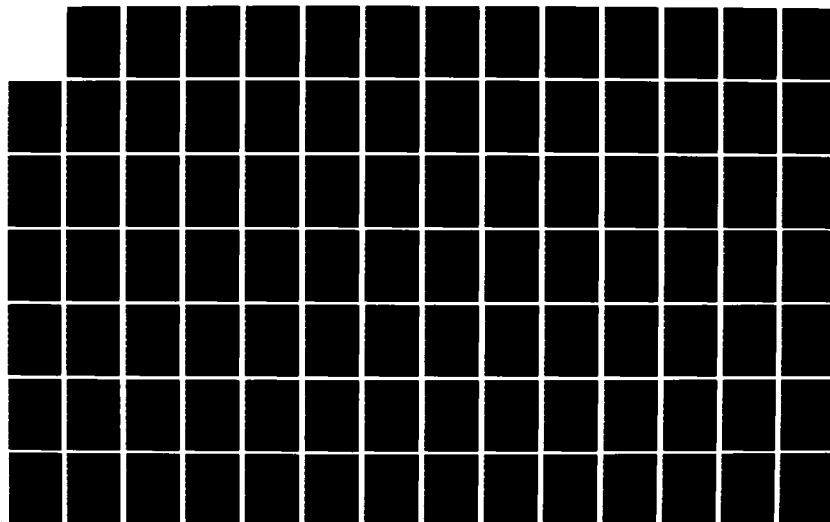
HELICOPTER FLYING QUALITIES CHARACTERISTICS-CH-46E
VOLUME 4(U) BOEING VERTOL CO PHILADELPHIA PA 03 OCT 83
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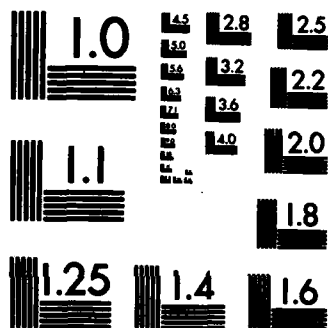
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REPORT NO. NADC-81118-60



HELICOPTER FLYING QUALITIES CHARACTERISTICS-CH-46E VOLUME 4

BOEING VERTOL CO.
Boeing Center, P.O. Box 16858
Philadelphia, PA 19142

3 OCTOBER 1983

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Warminster, PA 18974

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19. KEY WORDS (Continue on reverse side if necessary and identify by block number) CH-46E; Helicopter; Flying Qualities		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This document defines the flying qualities characteristics of the CH-46E helicopter. The data are representative of both the metal-bladed and composite-bladed versions. Analytically computed static trim data are presented for a wide range of configurations (gross weight, c.g.) and flight conditions (airspeed, altitude, sideslip, climb, autorotation). Correlation of trim data with available flight test data is provided for validation. (see next page)		

20. ABSTRACT (continued)

Analytically computed static stability and control derivatives are compiled for significant combinations of configuration and flight condition. Time history data relating to dynamic stability, control response and SAS failures are extracted from flight test records obtained during the Contractor's CH-46E SLEP II flight test program.



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VOLUME 4

CH-46E TRIM AND STABILITY DERIVATIVES DATA

This Volume contains the trim and stability derivative output data obtained from the Boeing Vertol Tandem Rotor Trim and Stability Analysis Program (A-97), for the CH-46E helicopter. The flight conditions considered are grouped under 15 headings on page 11. The first page in each group catalogs all the trim and derivative cases in that group. Those flight conditions at which stability and control derivatives were obtained are designated by an X in the appropriate column of the catalog.

The trim output parameters are defined in the legend beginning on page 3. These parameters are listed in the order of their appearance on the output sheet.

Each derivative output is broken down into three pages. The first page presents the three force (X, Y, Z) and the three moment (L, M, N) derivatives of the whole helicopter with respect to three velocity perturbations (u, v, w), three angular rate perturbations (p, q, r), four control input perturbations (δ_B , δ_S , δ_R , δ_C), and two aerodynamic incidence perturbations (β , α). The format of the output presents first the derivatives of X-force with respect to these twelve perturbations. Hence XU is the derivative of X-force with respect to u (dX/du), XV is the derivative of X-force with respect to v (dX/dv), and so forth through XALPHA = ($dX/d\alpha$). The X-force derivatives are followed by the twelve Z-force derivatives, twelve M-moment derivatives, twelve Y-force derivatives, twelve L-moment derivatives and twelve N-moment derivatives. In all cases, the force derivatives are non-dimensionalized by the helicopter mass, and the moment derivatives by the appropriate moments of inertia, which are listed at the top of the first page of derivative output. The definitions, sign conventions and units of the forces, moments and perturbations are set forth on page 8.

The second page of derivative output consists of component derivatives arranged in an array of longitudinal rotor force, rotor flapping, induced velocity and fuselage force derivatives with respect to six longitudinal perturbations, and an array of lateral-directional rotor force, flapping and fuselage force derivatives with respect to five lateral-directional perturbations. The value at the intersection of each line and column of the array is the derivative of the parameter at the extreme left with respect to the perturbation at the head of the column. For example, the derivative of CTR with respect to ALPHA ($dC_{TR}/d\alpha$) is the second entry in the column under ALPHA. The parameters involved in these derivatives are defined under "Component Derivative Parameters" beginning on page 9.

The third page of derivative output consists of four small arrays of supplementary derivatives. The first array presents derivatives of the six helicopter forces and moments with respect to perturbations in rotor longitudinal cyclic pitch and rotor RPM, and the second array presents rotor component derivatives with respect to longitudinal cyclic and RPM. These arrays are read in the same manner as the second page of derivative output. The third and fourth arrays present the derivatives of forward and aft rotor torque with respect to perturbations in aircraft velocity, angular rate, control input and aerodynamic incidence angle. These arrays are read in the same manner as the first page of derivative output. The parameters involved in these derivatives are defined under "Supplementary Derivative Parameters" beginning on page 10.

A97 TRIM ANALYSIS OUTPUT DEFINITION

(In order of appearance)

V	True airspeed along flight path	knots
FE	Equivalent drag area of fuselage	ft ²
RC	Rate of climb	ft./min.
ALPHA	Fuselage angle of attack w.r.t. remote airstream	deg.
GW	Helicopter gross weight	lb.
ALFF	Fuselage angle of attack w.r.t. local airstream	deg.
RHO	Atmospheric density	sl./ft ³
THETA	Fuselage pitch attitude (Euler angle)	deg.
XFLW	Forward rotor propulsive force parallel to local airstream	lb.
LFLW	Forward rotor lift force force perpendicular to local airstream	lb.
VTF(R)	Forward (aft) rotor tip speed	ft./sec.
CGF	C.G. location ahead of reference station (approx.)	in.
CGL	Lateral c.g. offset from butt line 0	in.
BETAF	Fuselage sideslip angle	deg.
PHI	Fuselage roll attitude (Euler angle)	deg.
PSI	Fuselage yaw attitude (Euler angle)	deg.
GAMMA	Flight path climb angle	deg.
XR LW	Aft rotor propulsive force parallel to local airstream	lb.
LR LW	Aft rotor lift force perpendicular to local airstream	lb.
THEOF(R)	Forward (aft) rotor root collective pitch at CL of rotor	deg.

AlCF(R)	Forward (aft) rotor lateral cyclic pitch (positive tilts TPP toward advancing side)	deg.
BlTF(R)	Forward (aft) rotor longitudinal trim cyclic pitch (positive tilts TPP forward)	deg.
BlCF(R)	Forward (aft) rotor total longitudinal cyclic pitch (positive tilts TPP forward)	deg.
DFW	Fuselage drag parallel to local airstream	lb.
LFFW	Fuselage lift perpendicular to local airstream	lb.
THETAC	Mean rotor root collective pitch	deg.
DELTAB	Longitudinal stick position (all trim systems neutral)	in.
DELTAS	Lateral stick position (all trim system neutral)	in.
DELTAR	Directional pedal position (all trim systems neutral)	in.
DELTAC	Collective stick position	in.
TF(R)	Forward (aft) rotor thrust parallel to shaft axis	lb.
HF(R)	Forward (aft) rotor downstream force perpendicular to shaft axis	lb.
YF(R)	Forward (aft) rotor side force perpendicular to shaft axis toward advancing side	lb.
MHF(R)	Forward (aft) rotor nose-up hub moment	lb.-ft.
LHF(R)	Forward (aft) rotor roll hub moment toward advancing side	lb.-ft.
QF(R)	Forward rotor torque required	lb.-ft.
LFZ	Fuselage lift in fuselage axis system	lb.
DFX	Fuselage drag in fuselage axis system	lb.
YFY	Fuselage side force to right side	lb.

MF	Fuselage nose-up pitch moment	lb.-ft.
LF	Fuselage right roll moment	lb.-ft.
NF	Fuselage right yaw moment	lb.-ft.
RHPF(R)	Forward (aft) rotor power required	HP
XR	Total rotor propulsive force along flight path	lb.
L/DE	Equivalent lift/drag ratio of helicopter	-
SHPTOT	Total power required by helicopter	HP
WFF	Dummy parameter	-
NMLB	Dummy parameter	-
SIGOF(R)	Forward (aft) rotor solidity ratio	-
CTSF(R)	Forward (aft) rotor thrust coefficient	-
CPSF(R)	Forward (aft) rotor power coefficient	-
AMTF(R)	Forward (aft) rotor advancing tip Mach No.	-
LAMDAF(R)	Forward (aft) rotor inflow ratio	-
MUF(R)	Forward (aft) rotor advance ratio	-
VF(R)	Forward (aft) rotor induced velocity	ft./sec.
DFFR	Interference factor for forward rotor on aft rotor	-
DFRF	Interference factor for aft rotor on forward rotor	-
DFF	Interference factor for both rotors on fuselage	-
AOF(R)	Forward (aft) rotor coning angle	deg.
AlF(R)	Forward (aft) rotor longitudinal flapping angle (positive for aft TPP tilt)	deg.
BlF(R)	Forward (aft) rotor lateral flapping angle (positive for TPP tilt to advancing side)	deg.

BETAOF(R)	Forward (aft) rotor blade flap angle at downwind azimuth ($\psi = 0^\circ$)	deg.
B180F(R)	Forward (aft) rotor blade flap angle at upwind azimuth ($\psi = 180^\circ$)	deg.
A270F(R)	Forward (aft) rotor blade tip angle of attack on retreating side ($\psi = 270^\circ$)	deg.
CAPVF(R)	Forward (aft) rotor velocity in local airstream	ft./sec.
ALPHAF(R)	Forward (aft) rotor disc angle of attack w.r.t. local airstream	deg.
BETAF(R)W	Forward (aft) rotor disc sideslip angle w.r.t. local airstream	deg.
ATIPF(R)	Forward (aft) rotor TPP angle of attack w.r.t. remote airstream	deg.
BPTPF(R)	Forward (aft) rotor total flapping amplitude (lateral and longitudinal)	deg.
XFF, LFF ZFF, YFF MFF, NFF	Force and moment components of external force applied to the helicopter (e.g. auxiliary propulsion, tow cable force, etc.)	lb. & lb.-ft.
TP	Magnitude of external force on helicopter	lb.
RMTF(R)	Forward (aft) rotor retreating blade tip Mach No.	-
CTF(R)P	Thrust coefficient format for LF(R) LW	-
A90F(R)	Forward (aft) rotor blade tip angle of attack on advancing side ($\psi = 90^\circ$)	deg.
DELHPF(R)	Additional power computed for forward (aft) rotor by nonuniform downwash power correction	HP
RHPF(R)	Forward (aft) rotor power required, revised by nonuniform downwash power correction	HP
SHPTOT	Total power required by helicopter, revised by nonuniform downwash power correction	HP

WFF	Dummy parameter	-
NMLB	Dummy parameter	-
RP	Dummy parameter	-

A97 STABILITY DERIVATIVE OUTPUT DEFINITION

Helicopter Derivative Parameters

(In order of appearance)

X	Non-dimensionalized force component along helicopter longitudinal axis, positive forward	ft./sec ²
Z	Non-dimensionalized force component along helicopter vertical axis, positive down	ft./sec ²
M	Non-dimensionalized pitch moment about helicopter lateral axis, positive nose up	rad/sec ²
Y	Non-dimensionalized force component along helicopter lateral axis, positive right	ft./sec ²
L	Non-dimensionalized roll moment about helicopter longitudinal axis, positive roll right	rad/sec ²
N	Non-dimensionalized yaw moment about helicopter vertical axis, positive nose right	rad/sec ²
U	Velocity perturbation along helicopter longitudinal axis, positive forward	ft./sec.
V	Velocity perturbation along helicopter lateral axis, positive right	ft./sec.
W	Velocity perturbation along helicopter vertical axis, positive down	ft./sec.
P	Angular rate perturbation about helicopter longitudinal axis, positive roll right	rad/sec.
Q	Angular rate perturbation about helicopter lateral axis, positive nose up	rad/sec.
R	Angular rate perturbation about helicopter vertical axis, positive nose right	rad/sec.
DELB	Pitch control perturbation about helicopter lateral axis, positive nose up	in.

DELS	Roll control perturbation about helicopter longitudinal axis, positive roll right	in.
DELR	Yaw control perturbation about helicopter vertical axis, positive nose right	in.
DELTAC	Collective control perturbation along helicopter vertical axis, positive up	in.
ALPHA	Aerodynamic angle of attack perturbation, ($\tan^{-1} W/U$)	rad
BETA	Aerodynamic sideslip angle perturbation, ($\tan^{-1} V/U$)	rad

Component Derivative Parameters

(In alphabetical order)

ALPHA	Aerodynamic angle of attack perturbation	rad
AlC	Rotor lateral cyclic pitch perturbation (positive tilts TPP toward advancing side)	rad
AlF(R)	Forward (aft) rotor longitudinal flapping angle (positive for aft TPP tilt)	rad
BETA	Aerodynamic sideslip angle perturbation	rad
BlF(R)	Forward (aft) rotor lateral flapping angle (positive for TPP tilt to advancing side)	rad
CHF(R)	Forward (aft) rotor downstream force coefficient, perpendicular to shaft axis	-
CTF(R)	Forward (aft) rotor thrust coefficient, parallel to shaft axis	-
CYF(R)	Forward (aft) rotor sideforce coefficient, perpendicular to shaft toward advancing side	-
DF	Fuselage drag in fuselage axis system	lb.
LF	Fuselage lift in fuselage axis system	lb.
LF	Fuselage right roll moment	lb.-ft.

MF	Fuselage nose up pitch moment	lb.-ft.
MU	Rotor advance ratio perturbation	-
NF	Fuselage nose right yaw moment	lb.-ft.
P	Angular rate perturbation about helicopter longitudinal axis, positive roll right	rad/sec.
Q	Angular rate perturbation about helicopter lateral axis, positive nose up	rad/sec.
R	Angular rate perturbation about helicopter vertical axis, positive nose right	rad/sec.
THETAC	Rotor collective pitch perturbation	rad
U	Velocity perturbation along helicopter longitudinal axis, positive forward	ft./sec.
V	Velocity perturbation along helicopter lateral axis, positive to right	ft./sec.
VF(R)R	Forward (aft) rotor induced velocity	ft./sec.
W	Velocity perturbation along helicopter vertical axis, positive down	ft./sec.
YF	Fuselage side force to right side	lb.

Supplementary Derivative Parameters

(In alphabetical order)

B1CF(R)	Forward (aft) rotor longitudinal cyclic pitch perturbation (positive tilts TPP forward)	rad
OMEGAF(R)	Forward (aft) rotor RPM perturbation (not computed for synchronized rotors)	rad/sec.
QF(R)	Non-dimensionalized forward (aft) rotor torque required	rad/sec ²

All other parameters are as defined above for "Helicopter Derivative Parameters" and "Component Derivative Parameters".

FLIGHT CONDITIONS FOR
CH-46E TRIM AND STABILITY DERIVATIVE ANALYSIS

GW = 24,300 lb CG = 6 in. fwd

<u>ALTITUDE</u>	<u>AIRSPEED</u>	<u>CLIMB RATE</u>	<u>SIDESLIP</u>	<u>PAGE</u>
0 ft	-40 to 138 kt	0 ft/min	0 deg	12
8000	0 to 93	0	0	51
0	60 to 120	AUTO & MPC	0	77
0	50 to 130	0	$\pm \beta$ max	100
0	-45 to 45	0	± 90	161

GW = 17,500 lb CG = 20 in. aft

<u>ALTITUDE</u>	<u>AIRSPEED</u>	<u>CLIMB RATE</u>	<u>SIDESLIP</u>	
0 ft	-40 to 146 kt	0 ft/min	0 deg	180
14000	0 to 112	0	0	221
0	60 to 120	AUTO & MPC	0	248
0	50 to 140	0	$\pm \beta$ max	271
0	-45 to 45	0	± 90	331

GW = 17,500 lb CG = 40 in. fwd

<u>ALTITUDE</u>	<u>AIRSPEED</u>	<u>CLIMB RATE</u>	<u>SIDESLIP</u>	
0 ft	-40 to 146 kt	0 ft/min	0 deg	350
14000	0 to 112	0	0	392
0	60 to 120	AUTO & FPC	0	419
0	50 to 140	0	$\pm \beta$ max	442
0	-45 to 45	0	0	503

CATALOG OF TRIM & STABILITY DERIVATIVE DATA

A-97 TRIM ANALYSIS (CH-46E)

GW = 24,300 lb CG = 6 in. fwd

<u>ALTITUDE</u>	<u>AIRSPEED</u>	<u>CLIMB RATE</u>	<u>SIDESLIP</u>	<u>DERIVATIVES</u>
0 ft	-40 kt	0 ft/min	0 deg	X
	-20			
	0			X
	20			
	40			X
	60			
	80			X
	100			
	120			X
	138			X

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V	RC	GW	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
-4.00000D+01	0.0	2.43000D+04	2.37800D-03	5.602107D+03
4.40000D+01	1.884710D+02	2.043478D+02	8.545682D+00	1.134364D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.05000D+02	6.239495D+00	0.0	0.0	1.831870D+02
7.05000D+02	0.0	-2.457389D-01	0.0	1.228255D+04
THEOF	AICF	BITF	BICF	DFW
THEOR	AICR	BITR	BICR	LEFW
1.816669D+01	-1.354427D+00	-2.50000D+00	-2.50000D+00	3.252502D+02
1.467809D+01	-1.842888D+00	-2.50000D+00	-2.50000D+00	6.169507D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.642239D+01	2.729731D+00	1.637347D-01	-6.782699D-01	7.304178D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.265148D+04	4.303382D+01	-3.788600D+02	1.468875D+02	-1.298806D+03
1.228320D+04	1.321724D+02	-4.531899D+02	4.210089D+02	-1.581765D+03
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
2.846001D+04	-6.581322D+02	3.211347D+01	1.512407D+02	1.430610D+03
1.412784D+04	-2.308200D+02	4.663443D+03	-3.493003D+02	7.101696D+02
XR	L/DE	SHPTOT	WFF	NMLB
2.632629D+02	-1.313095D+00	2.240780D+03	2.241780D+03	1.784297D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	8.964360D-02	7.912592D-03	6.914683D-01	-7.217898D-02
5.841923D-02	8.686634D-02	3.927892D-03	6.906918D-01	-3.078123D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
9.581093D-02	1.722603D+01	2.276305D-07	1.090894D+00	5.132605D+00
9.579480D-02	1.996547D+01	1.745128D+00		4.692174D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
-2.372058D-01	2.109434D+00	5.340749D+00	4.838993D+00	7.379078D+00
-6.851600D-01	2.568682D+00	5.300685D+00	3.950262D+00	5.981261D+00
CAPVF	ALPHAF	BETAFW	ATPF	BPTF
CAPVR	ALPHAR	BETARW	ATPR	BPTPR
7.546198D+01	-2.647756D+01	1.799650D+02	1.787338D+02	2.122729D+00
6.755760D+01	-1.470973D+00	1.799650D+02	1.807858D+02	2.658491D+00

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMTF	CTFP	A90F
RMTR	CTRP	A90RA
5.671561D-01	8.042225D-02	3.640780D+00
5.657997D-01	8.707877D-02	2.698218D+00

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NHLB
DELHPR	RHPR	WFF	RP
0.0	1.430610D+03	2.240780D+03	-1.784297D-02
0.0	7.101696D+02	2.241780D+03	-4.335841D+02

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
7.552682D+02	1.773500D+04	1.157010D+05	1.067690D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-6.548528D-02	1.289021D+00	2.202848D-01	8.157483D-01
-2.032680D-03	5.655140D-01	-1.401682D-03	-3.313911D-03
4.646550D-02	-2.568494D-01	-3.585763D-02	7.575345D-02
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
2.369900D-01	-7.444101D+00	-7.549499D-01	-4.806850D+00
5.860146D-03	3.249845D+00	6.333688D-04	9.553890D-03
-3.760359D-01	7.154474D-01	-1.962052D-02	-6.130574D-01
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-4.424813D-03	7.732915D-01	4.092900D-01	-1.489903D-01
1.503759D-03	-1.159498D+00	2.999484D-03	2.451603D-03
-1.693818D-02	-3.622707D-01	-9.219998D-04	-2.761459D-02
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
4.922729D-04	-1.528507D+00	-1.411646D-01	5.617656D-02
3.674528D-02	2.607979D-01	8.971766D-01	5.990641D-02
5.744898D-03	-3.346348D-02	3.933668D-02	9.366000D-03
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
2.645621D-04	-8.516086D-01	-1.030905D-01	7.467059D-03
-1.882570D-03	3.008706D-01	4.168169D-01	-3.069184D-03
2.316032D-03	1.876717D-02	-1.278794D-01	3.775864D-03
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
2.810089D-04	-1.711555D-02	5.074219D-02	6.992069D-05
-1.785252D-03	-2.182379D-01	1.986990D-02	-2.910525D-03
6.251692D-05	-8.078280D-02	1.706115D-01	1.019223D-04

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	-0.479D-04	-0.337D-01	0.335D-04	0.547D-04	-0.203D-02	0.265D-01
CTR	-0.293D-04	-0.207D-01	0.765D-04	0.125D-03	0.103D-02	0.428D-01
CHF	0.376D-05	0.265D-02	0.956D-07	0.156D-06	-0.115D-03	0.983D-03
CHR	0.261D-05	0.184D-02	0.553D-07	0.902D-07	-0.276D-03	-0.741D-03
AIF	-0.749D-03	-0.528D+00	0.886D-05	0.144D-04	0.699D-01	0.216D+00
AIR	-0.561D-03	-0.396D+00	0.181D-03	0.296D-03	0.790D-01	0.264D+00
VFR	-0.446D-01	-0.314D+02	0.169D+00	0.276D+00	-0.852D+01	0.521D+02
VER	0.129D+00	0.907D+02	0.386D+00	0.630D+00	0.487D+01	0.155D+03
LF			0.208D+02	0.339D+02		
DF			0.417D+00	0.681D+00		
NF			-0.110D+03	-0.179D+03		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.330D-05	-0.539D-05	-0.216D-03	-0.428D-04	0.548D-02
CYR	0.257D-05	0.419D-05	0.263D-03	0.323D-04	0.519D-02
BIF	0.662D-03	0.108D-02	0.780D-01	0.202D-01	-0.104D+01
BIR	-0.652D-03	-0.106D-02	-0.755D-01	-0.277D-03	-0.103D+01
YF	0.419D+02	0.684D+02			
LF	0.119D+03	0.194D+03			
NF	-0.142D+03	-0.232D+03			
CTF					-0.748D-04
CTR					0.181D-03

FORCE = 0.241446D+07

PROG. A97 EP04280D1

X	BICF	BICR	OMEGAF	OMEGAR
Z	0.208D+02	0.173D+02	0.0	0.0
M	-0.163D+02	-0.811D+01	0.0	0.0
Y	0.740D+00	-0.425D+01	0.0	0.0
L	-0.183D+00	0.587D+00	0.0	0.0
N	-0.103D+00	0.186D+00	0.0	0.0
	0.553D-01	0.286D-01	0.0	0.0
CTF	0.622D-02	-0.269D-02	0.0	0.0
CTR	-0.455D-06	0.596D-02	0.0	0.0
CHF	-0.554D-02	0.332D-04	0.0	0.0
CHR	0.307D-06	-0.521D-02	0.0	0.0
AIF	0.106D+01	-0.802D-02	0.0	0.0
AIR	-0.799D-04	0.104D+01	0.0	0.0
VFR	0.182D+02	-0.115D+02	0.0	0.0
VRR	0.217D-01	0.215D+02	0.0	0.0
QF	0.254D+01	-0.117D+01	0.0	0.0
QR	0.552D-05	-0.226D+01	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELR	QFALPHA
	-0.136D-01	0.271D+00	0.114D+01	0.193D+01
	0.265D-03	-0.155D+01	0.167D-01	0.433D-03
	0.162D-01	-0.112D+01	0.208D-01	0.264D-01
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBEIA
	QRW	QRR	QRDELR	QRALPHA
	0.152D-01	0.882D+00	-0.569D+00	0.116D+01
	0.135D-02	-0.638D+00	-0.969D-02	0.220D-02
	-0.277D-01	0.539D+00	0.169D-01	-0.452D-01

PROG. A97 EP042807P1

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V	RC	GW	RH0	XF LW
FE	ALPHA	ALFF	THETA	LF LW
-2.000000D+01	0.0	2.430000D+04	2.378000D-03	7.516876D+03
4.400000D+01	1.870297D+02	2.301661D+02	7.075247D+00	1.005199D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	6.239495D+00	0.0	0.0	-3.399354D+02
7.050000D+02	0.0	-2.379936D-01	0.0	1.242616D+04
THEOF	AICF	BITF	BICF	DFW
THEOR	AICR	BITR	BICR	LEFW
1.801511D+01	-8.198439D-01	-2.500000D+00	-2.500000D+00	1.589690D+02
1.575533D+01	-1.223279D+00	-2.500000D+00	-2.500000D+00	6.709006D+02
THETAC	DELIAB	DELTAS	DELTAR	DELTAC
1.688522D+01	1.768217D+00	1.373744D-01	-4.290099D-01	7.662963D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.254792D+04	3.092186D+02	-2.319909D+02	8.717283D+02	-7.710481D+02
1.242598D+04	3.463771D+02	-3.214808D+02	9.448261D+02	-1.071467D+03
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
2.832955D+04	-6.853126D+02	1.295854D+01	7.040030D+01	1.424052D+03
1.873952D+04	-7.566670D+01	3.272905D+03	-2.741504D+02	9.419867D+02
XR	L/DE	SHPTOT	WFF	NMLB
1.209137D+02	-6.033677D-01	2.466039D+03	2.467039D+03	8.106885D-03
SIGOF	CISF	CPSF	AMTF	LAMDAF
SIGOR	CISR	CPSR	AMTR	LAMDAR
5.841923D-02	8.879894D-02	7.876320D-03	6.600990D-01	-7.150190D-02
5.841923D-02	8.842362D-02	5.210054D-03	6.600663D-01	-4.422235D-02
MUF	VF	DFFR	DFF	AOF
MUR	VR	DFRF		AOR
4.786867D-02	2.383302D+01	1.384558D-07	1.311298D+00	5.074353D+00
4.791319D-02	3.115906D+01	8.985816D-01		4.806547D+00
A1F	B1F	BETA0F	B180F	A270F
A1R	B1R	BETA0R	B180R	A270R
-1.414907D+00	1.252719D+00	6.472570D+00	3.642267D+00	6.251646D+00
-1.535119D+00	1.739197D+00	6.407705D+00	3.271235D+00	5.489957D+00
CAPVF	ALPHA F	BETAFW	AT1PF	BP1PF
CAPVR	ALPHA R	BETARW	AT1PR	BP1PR
4.294391D+01	-3.820077D+01	1.799715D+02	1.761148D+02	1.889780D+00
3.377880D+01	-2.970259D-02	1.799715D+02	1.784946D+02	2.319784D+00

PROG. A97 EP04280TP1

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMTF	CTFP	A90F
RMTB	CTRP	A90RA
5.996806D-01	7.126498D-02	4.425703D+00
5.980424D-01	8.809692D-02	3.705473D+00

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP

0.0	1.424052D+03	2.466039D+03	-8.106885D-03
0.0	9.419867D+02	2.467039D+03	-1.969973D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

V	RC	GN	RHO	XF LM
FE	ALPHA	ALFF	THETA	LF LM
0.0	0.0	2.430000D+04	2.378000D-03	1.255609D+04
4.400000D+01	0.0	2.700000D+02	5.797543D+00	5.734488D+02
VTF	CGF	BETAF	PSI	XR LM
VTR	CGL	PHI	GAMMA	LR LM
7.050000D+02	6.239495D+00	0.0	0.0	1.264269D+04
7.050000D+02	0.0	-2.041365D-01	0.0	5.733841D+02
THEOF	AICF	B1TF	BICF	DFW
THEOR	AICR	B1TR	BICR	LFFW
1.658122D+01	3.650222D-01	-2.500000D+00	-2.500000D+00	-4.206290D-14
1.681019D+01	-3.129794D-02	-2.500000D+00	-2.500000D+00	-9.188959D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.669570D+01	-1.791586D-01	1.316202D-01	6.124864D-02	7.516050D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.255609D+04	5.734488D+02	7.475013D+01	1.612828D+03	2.079180D+02
1.264269D+04	5.733841D+02	-1.435590D+01	1.611185D+03	-4.096610D+01
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
2.253263D+04	-9.188959D+02	-2.054317D-14	-1.244938D-13	1.132656D+03
2.349695D+04	-4.206290D-14	1.102675D+03	6.178020D-13	1.181130D+03
XR	L/DE	SHPTOT	WFF	NMLB
2.478414D+03	0.0	2.413786D+03	2.414786D+03	0.0
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	8.924315D-02	6.264633D-03	6.317625D-01	-5.530203D-02
5.841923D-02	8.936667D-02	6.532736D-03	6.315357D-01	-5.798444D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
4.595983D-19	3.712995D+01	1.406733D-01	1.299000D+00	4.994031D+00
1.292043D-18	3.565511D+01	5.209670D-02		5.019363D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
2.619589D+00	3.375891D-01	2.343623D+00	7.611752D+00	4.970896D+00
2.616918D+00	-6.651482D-02	2.362622D+00	7.632671D+00	5.036967D+00
CAPVF	ALPHAF	BETAFW	AT1PF	BPTPF
CAPVR	ALPHAR	BETARW	AT1PR	BPTPR
1.857965D+00	2.700000D+02	0.0	-6.880411D+00	2.641252D+00
5.223194D+00	2.700000D+02	0.0	-4.383082D+00	2.617764D+00

CASE 2

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMTF	CTFP	A90F
RMTR	CTRP	A90RA
6.279886D-01	4.065543D-03	4.824445D+00
6.283769D-01	4.065084D-03	4.899287D+00

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
0.0	1.132656D+03	2.413786D+03	0.0
0.0	1.181130D+03	2.414786D+03	0.0

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CASE 2

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
7.552682D+02	1.773500D+04	1.157010D+05	1.067690D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-2.304430D-02	-3.821157D+00	6.176001D-02	5.921600D-01
-1.934286D-04	1.115055D+00	1.966374D-03	-6.157023D-04
1.048991D-01	-1.213834D-01	-3.656628D-02	3.339041D-01
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
6.988000D-03	4.333519D+01	4.003623D-02	-5.760093D+00
1.535974D-03	2.958275D-01	-1.267439D-02	4.889156D-03
-1.244874D+00	-2.600074D-02	-6.246701D-03	-3.962558D+00
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	NBETA
MW	MR	MDELR	MALPHA
-3.883835D-04	5.431754D+00	3.280632D-01	4.472352D-03
-2.645251D-04	-6.029958D-01	-1.598281D-03	-8.420094D-04
-1.169734D-01	-2.884334D-01	3.166027D-03	-3.723378D-01
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
-1.966522D-04	-9.420299D-01	1.294129D-03	2.203133D-02
-2.878837D-01	1.722269D-03	9.102605D-01	-9.163621D-01
3.945788D-03	-1.682173D-01	-3.298717D-03	1.255983D-02
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
-2.495275D-04	-8.451813D-01	-4.776171D-02	-5.429664D-03
-9.852081D-03	1.692071D-01	4.243508D-01	-3.136015D-02
8.197388D-03	-2.462894D-02	-1.462974D-01	2.609310D-02
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
2.049411D-04	2.759618D-01	5.539545D-02	-1.602231D-03
2.098874D-03	-2.138066D-01	1.632103D-02	6.680923D-03
-9.107569D-03	-8.347065D-02	1.728073D-01	-2.899029D-02

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	-0.360D-05	-0.254D-02	0.353D-04	0.112D-03	-0.729D-03	0.422D-01
CTR	-0.117D-05	-0.827D-03	0.374D-03	0.119D-02	0.683D-03	0.413D-01
CHF	0.273D-05	0.193D-02	0.203D-05	0.646D-05	-0.223D-03	0.193D-02
CHR	0.295D-05	0.208D-02	0.167D-04	0.533D-04	-0.167D-03	0.188D-02
AIF	0.903D-02	0.637D+01	0.904D-02	0.288D-01	-0.752D-01	0.298D-02
AIR	0.900D-02	0.635D+01	0.907D-02	0.289D-01	-0.773D-01	0.267D-02
VFR	-0.927D-01	-0.654D+02	0.523D+00	0.167D+01	-0.104D+02	0.154D+03
VRR	-0.561D-01	-0.396D+02	0.317D+01	0.101D+02	0.981D+01	0.140D+03
LF			-0.465D+02	-0.148D+03		
DF			-0.213D-14	-0.677D-14		
MF			0.558D+02	0.178D+03		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.291D-05	-0.926D-05	-0.182D-03	-0.749D-04	0.541D-02
CYR	0.289D-05	0.921D-05	0.112D-03	-0.222D-04	0.543D-02
BIF	0.903D-02	0.288D-01	-0.729D-01	-0.180D-01	0.103D+01
BIR	-0.901D-02	-0.287D-01	0.776D-01	-0.523D-03	0.103D+01
YF	-0.203D+03	-0.647D+03			
YR	-0.203D+02	-0.647D+02			
LF					
NF	0.244D+03	0.777D+03			
CTF					0.148D-04
CTR					-0.843D-05

FORCE = 0.241446D+07

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X	BICF	BICR	OMEGAF	OMEGAR
Z	0.171D+02	0.173D+02	0.0	0.0
M	0.276D+01	0.221D+01	0.0	0.0
Y	-0.131D+01	-0.129D+01	0.0	0.0
L	0.393D+00	-0.463D+00	0.0	0.0
N	0.143D+00	-0.278D+00	0.0	0.0
	0.493D-01	0.581D-01	0.0	0.0
CTF	0.241D-04	0.201D-05	0.0	0.0
CTR	0.596D-05	-0.262D-04	0.0	0.0
CHF	-0.541D-02	-0.141D-05	0.0	0.0
CHR	0.365D-06	-0.545D-02	0.0	0.0
AIF	-0.103D+01	-0.490D-03	0.0	0.0
AIR	0.388D-04	-0.103D+01	0.0	0.0
VFR	0.142D+00	0.947D-01	0.0	0.0
VRR	-0.765D-01	0.162D-01	0.0	0.0
QF	0.753D-02	0.772D-02	0.0	0.0
QR	0.357D-03	-0.204D+00	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELR	QFALPHA
	-0.744D-03	0.217D+00	0.857D+00	0.175D+01
	-0.664D-03	0.124D+01	0.243D-03	-0.211D-02
	0.365D-02	-0.712D+00	0.258D-03	0.116D-01
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELR	QRALPHA
	-0.549D-03	-0.983D+01	-0.883D+00	0.180D+01
	0.581D-03	0.141D+01	0.159D-02	0.185D-02
	0.285D+00	0.748D+00	0.131D-03	0.908D+00

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CASE 2

V	RC	GM	RH0	XF LW
FE	ALPHA	ALFF	THETA	LF LW
2.00000D+01	0.0	2.43000D+04	2.37800D-03	3.37800D+02
4.40000D+01	4.22220D+00	-4.45057D+01	4.295473D+00	1.225911D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.05000D+02	6.239495D+00	0.0	-1.403693D-02	6.786005D+03
7.05000D+02	0.0	-2.090745D-01	0.0	1.055705D+04
THEOF	AICF	BITF	BICF	DFW
THEOR	AICR	BITR	BICR	FFW
1.56237D+01	1.449029D+00	-2.50000D+00	-2.50000D+00	3.271737D+01
1.754527D+01	8.003489D-01	-2.50000D+00	-2.50000D+00	-5.029250D+02
THEIAC	DELIAB	DELIAS	DELIAR	DELIAC
1.658432D+01	-1.503829D+00	2.035431D-01	4.220131D-01	7.429706D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.223657D+04	8.119254D+02	2.829947D+02	2.153292D+03	8.024691D+02
1.252245D+04	8.303998D+02	1.982098D+02	2.308292D+03	6.342405D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.847997D+04	-4.991513D+02	1.143636D+01	6.066778D+01	9.289395D+02
2.626047D+04	6.965630D+01	-1.425148D+03	-2.211535D+02	1.320045D+03
XR	L/DE	SHPTOT	WFF	NMLB
9.454014D+01	6.369165D-01	2.348984D+03	2.349984D+03	8.510695D-03
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	8.752121D-02	5.137891D-03	6.625239D-01	-4.690044D-02
5.841923D-02	8.889232D-02	7.301064D-03	6.646447D-01	-6.977825D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF	AOR	AOR
4.771006D-02	2.992061D+01	7.804926D-01	1.315919D+00	5.046022D+00
4.785689D-02	2.418601D+01	1.156140D-03	8.802135D+00	5.071304D+00
ALF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
3.498377D+00	1.303045D+00	1.318122D+00	8.483715D+00	5.511634D+00
3.758548D+00	1.029843D+00	1.268197D+00	8.802135D+00	6.225817D+00
CAPVF	ALPHAF	BETAFW	ATIPF	BPIPF
CAPVR	ALPHAR	BETARW	ATIPR	BPIPR
3.378141D+01	-5.325488D+00	3.600000D+02	-1.779416D+00	3.733171D+00
4.198594D+01	-3.652654D+01	3.600000D+02	9.727555D-01	3.889368D+00

CASE 2

PAGE 4

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMTF	CTFP	A90F
RMIR	CTRP	A90RA
5.966961D-01	8.691262D-02	4.023659D+00
5.969306D-01	7.484565D-02	4.239973D+00

3

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SPTOT	NMLB
DELHPR	RHPR	MFF	RP
0.0	9.289395D+02	2.348984D+03	8.510695D-03
0.0	1.320045D+03	2.349984D+03	2.068099D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

CASE 3

PAGE 3

V	RC	GW	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
4.000000D+01	0.0	2.430000D+04	2.378000D-03	4.442294D+02
4.400000D+01	2.958033D+00	-1.391383D+01	2.999007D+00	1.204048D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	6.239495D+00	0.0	-9.717424D-03	4.559397D+03
7.050000D+02	0.0	-1.924909D-01	0.0	1.173446D+04
THEOF	AICF	BLTF	BICF	DFW
THEOR	AICR	BLTR	BICR	FFW
1.449061D+01	1.678944D+00	-2.500000D+00	-2.500000D+00	2.173585D+02
1.739925D+01	1.237082D+00	-2.500000D+00	-2.500000D+00	-3.264661D+02
THEIAC	DELTAB	DELTAS	DELTAR	DELTAC
1.594493D+01	-2.792362D+00	1.267470D-01	5.851937D-01	6.934051D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.201270D+04	9.304468D+02	3.754777D+02	2.674833D+03	1.327956D+03
1.254279D+04	1.078985D+03	3.222928D+02	2.994435D+03	1.143544D+03
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.353350D+04	-3.148145D+02	3.011681D+01	1.280716D+02	6.802937D+02
2.506451D+04	2.339160D+02	-1.925790D+03	-1.251055D+02	1.258967D+03
XR	L/DE	SHPTOT	WFF	NMLB
2.520333D+02	1.486239D+00	2.039261D+03	2.040261D+03	1.960534D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	8.523872D-02	3.762651D-03	6.936860D-01	-3.811770D-02
5.841923D-02	8.901716D-02	6.963248D-03	6.967265D-01	-7.131627D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
9.520243D-02	1.917132D+01	1.477477D+00	1.111521D+00	4.621644D+00
9.558803D-02	1.717545D+01	2.709087D-41		5.074918D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
4.347175D+00	2.156651D+00	2.450446D-01	8.926337D+00	5.866581D+00
4.867782D+00	1.857046D+00	1.158618D-01	9.884652D+00	7.214331D+00
CAPVF	ALPHAF	BETAFF	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
6.755760D+01	-6.541967D+00	3.600000D+02	-2.194792D+00	4.852739D+00
7.507403D+01	-2.615024D+01	3.600000D+02	8.258153D-01	5.209983D+00

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTR	CIFP	A90F	
5.66840D-01	CIRP	A90RA	
5.658011D-01	8.536264D-02	2.642799D+00	
	8.319305D-02	3.368920D+00	

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
3.064407D+00	6.833581D+02	2.045312D+03	1.954736D-02
2.986521D+00	1.261954D+03	2.046312D+03	4.750009D+02

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
7.552682D+02	1.773500D+04	1.157010D+05	1.067690D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-2.143321D-02	2.882085D-01	6.865435D-02	1.944923D-01
-5.840114D-04	1.212447D+00	-1.993264D-03	-3.947241D-02
2.519812D-02	-2.719865D-02	-3.669489D-02	1.703101D+00
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
-1.309212D-01	-6.214221D+00	5.920884D-01	-5.263274D+00
5.650905D-03	-1.430721D+00	-6.292439D-04	3.819357D-01
-5.576262D-01	-6.837868D-01	2.449122D-02	-3.768907D+01
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-3.508178D-03	-5.992819D-01	3.922492D-01	1.101389D-01
-1.174002D-03	-1.131568D+00	-2.836256D-03	-7.934894D-02
1.427250D-03	-3.122540D-01	1.668759D-03	9.646559D-02
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
1.558811D-04	-1.520977D+00	1.080736D-01	3.806736D-02
-6.341512D-02	-1.712106D-01	8.812843D-01	-4.286128D+00
1.767381D-03	-2.088945D-01	-4.192476D-02	1.194545D-01
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
-4.748103D-04	-8.701217D-01	4.456349D-03	5.243437D-03
-1.349868D-02	7.820335D-02	4.173798D-01	-9.123545D-01
7.781002D-04	-4.417899D-02	-1.567908D-01	5.259056D-02
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
3.163407D-04	9.548003D-03	4.753941D-02	-2.613952D-03
4.852968D-04	-2.108111D-01	1.256337D-02	3.280044D-02
4.905832D-06	-6.380650D-02	1.677689D-01	3.315774D-04

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	0.123D-04	0.864D-02	0.825D-04	0.558D-02	0.122D-02	0.432D-01
CTR	0.268D-04	0.189D-01	0.840D-04	0.568D-02	0.173D-02	0.311D-01
CHF	0.345D-05	0.243D-02	0.766D-05	0.518D-03	0.364D-03	0.451D-02
CHR	0.560D-05	0.395D-02	0.826D-05	0.559D-03	0.107D-04	0.384D-02
ALF	0.481D-03	0.339D+00	0.301D-03	0.203D-01	0.764D-01	0.265D+00
AIR	0.640D-03	0.452D+00	0.293D-03	0.198D-01	0.729D-01	0.243D+00
VFR	-0.192D+00	-0.136D+03	0.340D+00	0.230D+02	0.580D+01	0.151D+03
VRR	-0.559D-01	-0.394D+02	0.335D+00	0.226D+02	0.742D+01	0.722D+02
LF			0.177D+02	0.120D+04		
DF			0.540D+00	0.365D+02		
MF			0.731D+02	0.494D+04		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.246D-05	-0.166D-03	-0.239D-03	-0.742D-04	0.511D-02
CYR	0.305D-05	0.206D-03	0.236D-03	-0.691D-05	0.542D-02
BIF	0.669D-03	0.452D-01	-0.716D-01	-0.129D-01	0.103D+01
BIR	-0.676D-03	0.457D-01	0.820D-01	-0.221D-02	0.104D+01
YF	-0.346D+02	-0.234D+04			
LF	-0.876D+02	-0.592D+04			
NF	0.419D+02	0.283D+04			
CTF					-0.143D-03
CTR					-0.781D-04

FORCE = 0.241446D+07

X	BICF	BICR	OMEGAF	OMEGAR
Z	0.148D+02	0.167D+02	0.0	0.0
M	0.148D+02	0.219D+02	0.0	0.0
Y	-0.394D+01	0.817D+00	0.0	0.0
L	-0.435D+00	0.895D-01	0.0	0.0
N	-0.212D+00	-0.109D-01	0.0	0.0
	0.407D-01	0.516D-01	0.0	0.0
CTF	-0.583D-02	-0.207D-05	0.0	0.0
CTR	0.193D-02	-0.627D-02	0.0	0.0
CHF	-0.562D-02	-0.224D-06	0.0	0.0
CHR	0.185D-03	-0.604D-02	0.0	0.0
AIF	-0.104D+01	-0.166D-04	0.0	0.0
AIR	0.502D-02	-0.105D+01	0.0	0.0
VFR	-0.204D+02	0.190D-01	0.0	0.0
VRR	0.832D+01	-0.184D+02	0.0	0.0
QF	0.243D+01	0.112D-02	0.0	0.0
QR	0.503D+00	-0.186D+01	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELR	QFALPHA
	-0.879D-02	0.714D+00	0.544D+00	0.111D+01
	0.858D-03	0.318D+01	-0.935D-02	0.580D-01
	-0.322D-01	-0.303D+00	-0.148D-01	-0.218D+01
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELR	QRALPHA
	0.278D-03	-0.139D+00	-0.974D+00	0.181D+01
	0.575D-03	0.359D+01	0.119D-01	0.389D-01
	0.257D-01	0.695D+00	-0.191D-01	0.174D+01

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V	RC	GW	RH0	XF LW
FE	ALPHA	ALFF	THETA	LF LW
6.00000D+01	0.0	2.43000D+04	2.37800D-03	6.432143D+02
4.40000D+01	1.16566D+00	-6.285881D+00	1.26203D+00	1.185902D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.05000D+02	6.239495D+00	0.0	-3.928126D-03	2.441081D+03
7.05000D+02	0.0	-2.06145D-01	0.0	1.244072D+04
THEOF	AICF	B1TF	B1CF	DFW
THEOR	AICR	B1TR	B1CR	LFFW
1.422508D+01	1.113423D+00	-2.50000D+00	-2.50000D+00	5.365523D+02
1.644656D+01	8.714797D-01	-2.50000D+00	-2.50000D+00	-2.354223D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.533582D+01	-3.099752D+00	7.780997D-02	3.884910D-01	6.461875D+00
TF	MF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.182701D+04	1.082535D+03	2.617245D+02	3.140264D+03	1.138799D+03
1.260972D+04	1.313563D+03	2.341688D+02	3.512064D+03	9.737418D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.214435D+04	-2.244584D+02	6.538960D+01	2.517527D+02	6.104647D+02
2.051747D+04	5.412305D+02	-2.195309D+03	1.143356D+02	1.031360D+03
XR	L/DE	SHPTOT	WFF	NMLB
6.182651D+02	2.750291D+00	1.741824D+03	1.742824D+03	3.442688D-02
SIGOF	CISF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	8.372682D-02	3.376432D-03	7.239662D-01	-3.942276D-02
5.841923D-02	8.994627D-02	5.704368D-03	7.262548D-01	-6.259528D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF	DF	AOR
1.422216D-01	1.310352D+01	1.573114D+00	1.004817D+00	4.498818D+00
1.429950D-01	1.321285D+01	2.710547D-41		5.153336D+00
AIF	BIF	BETAOF	B18OF	A27OF
AIR	BIR	BETAOR	B18OR	A27OR
5.105459D+00	1.849337D+00	-6.834977D-01	9.506478D+00	6.542873D+00
5.711836D+00	1.581221D+00	-8.490971D-01	1.071704D+01	7.941028D+00
CAPVF	ALPHAF	BETAFW	AT1PF	BPTPF
CAPVR	ALPHAR	BETARW	AT1PR	BPTPR
1.013364D+02	-8.334340D+00	3.60000D+02	-3.228881D+00	5.430079D+00
1.054450D+02	-1.704846D+01	3.60000D+02	-1.225034D-01	5.926663D+00

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CASE 3

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMIF	CTFP	A90F	
RMIR	CIRP	A90RA	
5.379133D-01	8.407614D-02	1.933704D+00	
5.364671D-01	8.820017D-02	2.624229D+00	

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
8.896527D+00	6.193613D+02	1.760054D+03	3.407051D-02
9.332912D+00	1.040692D+03	1.761054D+03	8.279134D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

V	RC	GN	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
8.000000D+01	0.0	2.430000D+04	2.378000D-03	7.949357D+02
4.400000D+01	1.159829D+00	-2.928543D+00	1.192091D+00	1.193197D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	6.239495D+00	0.0	-5.168141D-03	1.668408D+03
7.050000D+02	0.0	-2.604910D-01	0.0	1.236700D+04
THEOF	AICF	B1TF	BICF	DEFW
THEOR	AICR	B1TR	B1CR	LFFW
1.462854D+01	4.902362D-01	-8.000000D-01	-8.000000D-01	9.589105D+02
1.602432D+01	2.787471D-01	-8.000000D-01	-8.000000D-01	-1.092233D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.532643D+01	-3.032692D+00	6.929000D-02	1.508287D-01	6.454596D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.192108D+04	9.442020D+02	1.561211D+02	2.653781D+03	9.657345D+02
1.243228D+04	1.079295D+03	1.363192D+02	2.957271D+03	9.051176D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.288961D+04	-8.979121D+01	9.284354D+01	3.814590D+02	6.479267D+02
1.802210D+04	9.609249D+02	-2.407283D+03	2.862710D+02	9.059237D+02
XR	L/DE	SHPTOT	WFF	NMLB
9.862745D+02	4.229110D+00	1.653850D+03	1.654850D+03	4.834274D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	8.497327D-02	3.583632D-03	7.526597D-01	-4.204782D-02
5.841923D-02	8.882858D-02	5.010592D-03	7.546054D-01	-5.725797D-02
MUF	VF	DFFR	DFF	AOF
MUR	VR	DFRF		AOR
1.896259D-01	1.004506D+01	1.633360D+00	9.523807D-01	4.556776D+00
1.906580D-01	1.021078D+01	2.717945D-41		4.865088D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B18OR	A27OR
4.312897D+00	1.568215D+00	4.153410D-02	8.681258D+00	7.715548D+00
4.807226D+00	1.469760D+00	-1.657037D-01	9.462634D+00	8.634829D+00
CAPVF	ALPHA F	BETAFW	AT1FF	BP1FF
CAPVR	ALPHA R	BETARW	AT1PR	BP1PR
1.351152D+02	-8.340171D+00	3.600000D+02	-4.027274D+00	4.589159D+00
1.377551D+02	-1.264490D+01	3.600000D+02	-1.032945D+00	5.026889D+00

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CASE 4

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTF	CTFP	A90F	
RMTR	CTRP	A90RA	
5.077184D-01	8.459328D-02	1.472917D+00	
5.066350D-01	8.767755D-02	1.734904D+00	

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
1.910454D+01	6.670313D+02	1.692756D+03	4.723230D-02
1.980109D+01	9.257248D+02	1.693756D+03	1.147745D+03

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
7.552682D+02	1.773500D+04	1.157010D+05	1.067690D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-3.423309D-02	1.429015D-01	8.604591D-02	1.011510D-01
-1.466102D-04	1.375448D+00	5.262997D-02	-1.981403D-02
2.307273D-02	-1.076379D-01	-3.679879D-02	3.118224D+00
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
-4.173269D-02	-2.231360D+00	5.860764D-01	-6.220970D+00
4.922233D-03	-1.622070D+00	-7.377879D-02	6.652281D-01
-6.115392D-01	-5.951774D-01	5.790555D-02	-8.264807D+01
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MM	MR	MDELR	MALPHA
-4.745646D-03	-5.748655D-02	4.560569D-01	1.542648D-01
-2.259209D-04	-1.321547D+00	-1.599936D-02	-3.053267D-02
1.132873D-02	-3.343210D-01	1.783994D-03	1.531051D+00
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
6.187725D-04	-1.523074D+00	6.722898D-02	3.404027D-02
-9.268704D-02	-8.326679D-02	8.302603D-01	-1.252643D+01
-1.962019D-03	-1.872456D-01	-3.378030D-02	-2.651622D-01
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
-3.527871D-04	-8.400506D-01	7.229681D-03	5.713758D-03
-1.373870D-02	4.787080D-02	3.830522D-01	-1.856752D+00
7.889768D-04	-3.990898D-02	-1.517989D-01	1.066283D-01
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
3.626218D-04	-6.157235D-03	3.384157D-02	-2.576190D-03
-1.802744D-03	-1.612547D-01	1.953351D-02	-2.436365D-01
-1.229009D-04	-6.175349D-02	1.660870D-01	-1.660977D-02

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	-0.309D-05	-0.218D-02	0.100D-03	0.136D-01	-0.144D-02	0.515D-01
CTR	0.141D-04	0.996D-02	0.770D-04	0.104D-01	0.202D-02	0.355D-01
CHF	0.197D-05	0.139D-02	0.106D-04	0.143D-02	-0.407D-03	0.643D-02
CHR	0.415D-05	0.293D-02	0.858D-05	0.116D-02	-0.202D-04	0.511D-02
AlF	0.411D-03	0.290D+00	0.638D-03	0.862D-01	-0.818D-01	0.571D+00
AlR	0.569D-03	0.401D+00	0.501D-03	0.678D-01	-0.646D-01	0.486D+00
VFR	-0.778D-01	-0.549D+02	0.205D+00	0.277D-02	-0.309D+01	0.103D+03
VRR	-0.403D-01	-0.284D+02	0.157D+00	0.212D+02	0.434D+01	0.659D+02
LF			0.318D+02	0.430D+04		
DF			-0.503D+00	-0.680D+02		
MF			0.159D+03	0.216D+05		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.240D-05	0.325D-03	-0.236D-03	0.737D-04	0.509D-02
CYR	0.277D-05	0.374D-03	0.242D-03	0.150D-04	0.533D-02
BIF	0.104D-03	0.141D-01	-0.691D-01	0.147D-01	0.103D+01
BIR	-0.106D-03	0.143D-01	0.770D-01	-0.266D-02	0.103D+01
YF	-0.575D+02	-0.777D+04			
LF	-0.102D+03	-0.138D+05			
NF	-0.195D+03	-0.263D+05			
CTF					-0.256D-03
CTR					-0.210D-03

FORCE = 0.241446D+07

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X	BICF	BICR	OMEGAF	OMEGAR
Z	0.134D+02	0.162D+02	0.0	0.0
M	0.319D+02	0.453D+02	0.0	0.0
Y	-0.743D+01	0.329D+01	0.0	0.0
L	-0.491D+00	0.487D-01	0.0	0.0
N	-0.481D+00	0.177D+00	0.0	0.0
	0.197D+00	-0.699D-01	0.0	0.0
CTF	-0.135D-01	-0.245D-07	0.0	0.0
CTR	0.425D-02	-0.136D-01	0.0	0.0
CHF	-0.645D-02	-0.104D-06	0.0	0.0
CHR	0.459D-03	-0.676D-02	0.0	0.0
AIF	-0.110D+01	-0.245D-04	0.0	0.0
AIR	0.243D-01	-0.111D+01	0.0	0.0
VFR	-0.270D+02	0.614D-02	0.0	0.0
VRR	0.916D+01	-0.265D+02	0.0	0.0
QF	0.624D+01	0.942D-03	0.0	0.0
QR	-0.912D+00	0.192D+01	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELR	QFALPHA
	-0.545D-02	0.764D-01	0.447D+00	0.929D+00
	0.404D-03	0.403D+01	-0.140D-01	0.546D-01
	-0.482D-01	-0.357D+00	-0.213D-01	-0.652D+01
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELR	QRALPHA
	-0.105D-01	-0.116D+00	-0.621D+00	0.142D+01
	-0.345D-04	0.304D+01	-0.585D-01	-0.466D-02
	-0.160D-01	0.511D+00	-0.238D-01	-0.216D+01

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V	RC	GM	RHO	XF	LW
FE	ALPHA	ALFF	THETA	LF	LW
1.000000D+02	0.0	2.430000D+04	2.378000D-03	1.046413D+03	
4.400000D+01	1.294151D+00	-1.269716D+00	1.322749D+00	1.206686D+04	
VTF	CGF	BETAF	PSI	XR	LW
VTR	CGL	PHI	GAMMA	LR	LW
7.050000D+02	6.239495D+00	0.0	-7.085152D-03	1.442207D+03	
7.050000D+02	0.0	-3.203898D-01	0.0	1.210630D+04	
THEOF	AICF	BIIF	BICF	DFW	
THEOR	AICR	BITR	BICR	LFFW	
1.551748D+01	-8.782984D-02	1.600000D+00	1.600000D+00	1.498153D+03	
1.620124D+01	-1.749980D-01	1.600000D+00	1.600000D+00	5.071941D+01	
THETAC	DELTAB	DELTAS	DELTAR	DELTAC	
1.585936D+01	-2.866791D+00	2.892584D-02	-5.699556D-02	6.867723D+00	
TF	HF	YF	MHF	LHF	
TR	HR	YR	MHR	LHR	
1.209267D+04	6.866033D+02	7.082619D+01	1.852735D+03	8.402921D+02	
1.216957D+04	7.375674D+02	6.051872D+01	2.008030D+03	7.995531D+02	
QF	LFZ	YFY	LF	RHPF	
QR	DFX	MF	NF	RHPR	
1.529989D+04	8.454266D+01	1.283722D+02	5.204953D+02	7.690853D+02	
1.792906D+04	1.496625D+03	-2.605233D+03	4.896018D+02	9.012471D+02	
XR	L/DE	SHPTOI	WFF	NMLB	
1.522415D+03	5.727568D+00	1.770332D+03	1.771332D+03	5.645468D-02	
SIGOF	CTSF	CPSF	AMTF	LAMDAF	
SIGOR	CTSR	CPSR	AMTR	LAMDAR	
5.841923D-02	8.648561D-02	4.253750D-03	7.811216D-01	-4.582161D-02	
5.841923D-02	8.656057D-02	4.984727D-03	7.824739D-01	-5.469797D-02	
MUF	VF	DFFR	DF	AOF	
MUR	VR	DFRF		AOR	
2.371132D-01	8.197934D+00	1.663098D+00	9.252915D-01	4.642719D+00	
2.383790D-01	8.136351D+00	6.124316D-41		4.701335D+00	
AIF	BIF	BETAOF	B180F	A270F	
AIR	BIR	BETAOR	B180R	A270R	
3.009586D+00	1.364473D+00	1.279446D+00	7.343538D+00	9.212882D+00	
3.262110D+00	1.298309D+00	1.072123D+00	7.641980D+00	9.567496D+00	
CAPVF	ALPHAF	BETAFW	ATIPF	BPTPF	
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR	
1.688940D+02	-8.205849D+00	3.600000D+02	-5.196263D+00	3.304451D+00	
1.707892D+02	-1.026186D+01	3.600000D+02	-2.443740D+00	3.510978D+00	

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMTR	CTFP	A90F
RMTR	CTRP	A90RA
4.773560D-01	8.554964D-02	1.111538D+00
4.765305D-01	8.582923D-02	1.204016D+00

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	NFF	RP
3.703144D+01	8.061168D+02	1.844516D+03	5.418538D-02
3.715246D+01	9.383996D+02	1.845516D+03	1.316705D+03

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

V	RC	GN	RHO	XF LW
FE	ALPHA	ALFF	THEIA	LF LW
1.200000D+02	0.0	2.430000D+04	2.378000D-03	1.260445D+03
4.400000D+01	3.950123D-01	-1.383609D+00	4.402904D-01	1.219621D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	6.239495D+00	0.0	-2.897783D-03	1.589622D+03
7.050000D+02	0.0	-4.304547D-01	0.0	1.194967D+04
THEOF	AICF	B1TF	BICF	DFW
THEOR	AICR	B1TR	BICR	LFFW
1.652549D+01	-2.660313D-01	2.800000D+00	2.800000D+00	2.157337D+03
1.716219D+01	-3.559054D-01	4.000000D+00	4.000000D+00	8.479755D+01
THEIAC	DELTAB	DELTAS	DELTAR	DELTAC
1.684384D+01	-3.174262D+00	1.029000D-02	-1.516481D-01	7.630884D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.224200D+04	6.854137D+02	5.864929D+01	1.864533D+03	8.867044D+02
1.204642D+04	4.533266D+02	5.790984D+01	1.268156D+03	9.289536D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.847454D+04	9.966867D+01	1.861127D+02	7.586383D+02	9.286669D+02
2.104082D+04	2.156701D+03	-3.869964D+03	6.991866D+02	1.057667D+03
XR	L/DE	SHPTOT	WFF	NMLB
2.195750D+03	7.010955D+00	2.086334D+03	2.087334D+03	5.748961D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LANDAR
5.841923D-02	8.676783D-02	5.136384D-03	8.107789D-01	-5.532464D-02
5.841923D-02	8.564260D-02	5.849871D-03	8.113728D-01	-5.856792D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
2.838569D-01	6.932822D+00	1.618399D+00	9.191692D-01	4.676605D+00
2.855711D-01	6.759314D+00	2.715417D-41		4.598625D+00
AIF	BIF	BETAOF	B18OF	A270F
AIR	BIR	BETAOR	B18OR	A270R
3.028768D+00	1.439853D+00	1.132310D+00	7.258837D+00	1.077835D+01
2.059491D+00	1.508474D+00	2.038444D+00	6.199418D+00	1.096130D+01
CAPVF	ALPHAF	BETAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
2.026728D+02	-9.104988D+00	3.600000D+02	-6.076220D+00	3.353597D+00
2.042675D+02	-9.732481D+00	3.600000D+02	-4.545497D+00	2.552841D+00

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMIF	CTFP	A90F
RMTR	CTRP	A90RA
4.475526D-01	8.646668D-02	7.513619D-01
4.466828D-01	8.471883D-02	7.403006D-01

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
6.116725D+01	9.898342D+02	2.207432D+03	5.433720D-02
5.993081D+01	1.117598D+03	2.208432D+03	1.320394D+03

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
7.552682D+02	1.773500D+04	1.157010D+05	1.067690D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-4.639774D-02	8.190768D-02	2.995072D-02	3.880805D-01
-7.295587D-04	1.232392D+00	-1.424371D-03	-1.478873D-01
4.534633D-02	-3.501802D-02	-3.933992D-02	9.192062D+00
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
1.828268D-02	-8.565600D-01	4.419884D-01	-7.310245D+00
5.161436D-03	-2.111599D+00	-6.128484D-03	1.046264D+00
-6.890382D-01	-5.364988D-01	8.998662D-02	-1.396735D+02
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-2.816400D-03	2.110222D-01	4.955564D-01	1.271578D-01
8.529271D-04	-1.369130D+00	-7.879279D-03	1.728951D-01
1.012176D-02	-3.561702D-01	1.518260D-03	2.051761D+00
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
2.280255D-03	-1.044760D+00	7.739074D-03	-9.370916D-04
-1.290233D-01	-5.803616D-03	8.726928D-01	-2.615405D+01
-3.806622D-03	-1.652531D-01	9.023258D-03	-7.716324D-01
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
2.141228D-04	-6.164785D-01	-2.586552D-02	-9.759720D-03
-1.637886D-02	6.529759D-02	4.113135D-01	-3.320125D+00
-5.234853D-04	-2.376264D-02	-1.360597D-01	-1.061146D-01
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
1.763654D-04	-4.439538D-02	5.373065D-02	-2.867393D-03
-3.698349D-03	-1.545054D-01	1.568339D-02	-7.496847D-01
-4.120916D-04	-8.277363D-02	1.659887D-01	-8.353424D-02

X	BICF	BICR	OMEGAF	OMEGAR
Z	0.105D+02	0.114D+02	0.0	0.0
H	0.550D+02	0.711D+02	0.0	0.0
Y	-0.106D+02	0.631D+01	0.0	0.0
L	0.183D+00	-0.231D+00	0.0	0.0
N	-0.104D+00	-0.212D-01	0.0	0.0
	-0.129D+00	0.236D+00	0.0	0.0
CTF	-0.218D-01	10.380D-06	0.0	0.0
CTR	-0.512D-02	-0.220D-01	0.0	0.0
CHF	-0.666D-02	0.854D-07	0.0	0.0
CHR	0.315D-03	-0.629D-02	0.0	0.0
AIF	-0.122D+01	0.154D-04	0.0	0.0
AIR	0.456D-01	-0.122D+01	0.0	0.0
VFR	-0.295D+02	-0.599D-02	0.0	0.0
VRR	0.722D+01	-0.295D+02	0.0	0.0
QF	-0.407D+01	-0.441D-03	0.0	0.0
QR	0.721D+00	-0.671D+01	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELR	QFALPHA
	-0.591D-02	-0.518D+00	0.762D+00	0.176D+01
	-0.178D-03	0.243D+01	-0.144D-01	-0.361D-01
	-0.655D-02	-0.739D+00	-0.224D-01	-0.133D+01
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELR	QRALPHA
	-0.720D-02	0.451D+00	-0.936D+00	0.186D+01
	-0.298D-03	0.199D+01	0.168D-01	-0.604D-01
	0.979D-02	0.824D+00	-0.293D-01	0.198D+01

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	-0.967D-05	-0.682D-02	0.187D-03	0.218D-01	-0.145D-02	0.581D-01
CTR	0.139D-05	0.982D-03	0.879D-04	0.178D-01	0.218D-02	0.447D-01
CHF	0.167D-05	0.117D-02	0.908D-05	0.184D-02	0.321D-03	0.572D-02
CHR	0.269D-05	0.189D-02	0.584D-05	0.118D-02	-0.436D-04	0.399D-02
ALF	0.392D-03	0.276D+00	0.102D-02	0.206D+00	-0.889D-01	0.899D+00
ALR	0.511D-03	0.360D+00	0.843D-03	0.171D+00	-0.590D-01	0.788D+00
VFR	-0.468D-01	0.330D+02	0.147D+00	0.297D+02	0.208D+01	0.788D+02
VRR	-0.303D-01	0.214D+02	0.120D+00	0.243D+02	0.299D+01	0.593D+02
LF			0.490D+02	0.993D+04		
DF			-0.124D+01	-0.252D+03		
MF			0.258D+03	0.524D+05		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.274D-05	-0.555D-03	-0.167D-03	-0.692D-04	0.523D-02
CYR	0.275D-05	0.557D-03	0.160D-03	-0.174D-04	0.516D-02
B1F	-0.250D-03	-0.506D-01	-0.658D-01	-0.169D-01	0.103D+01
B1R	0.352D-03	0.713D-01	0.722D-01	0.416D-03	0.103D+01
YF	-0.842D+02	-0.171D+05			
LF	-0.143D+03	-0.289D+05			
NF	-0.381D+03	-0.772D+05			
CTF					-0.385D-03
CTR					-0.320D-03

FORCE = 0.241446D+07

V	RC	GW	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
1.38000D+02	0.0	2.43000D+04	2.37800D-03	1.616104D+03
4.40000D+01	-2.402931D+00	-3.801612D+00	-2.354478D+00	1.236303D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.05000D+02	6.239495D+00	0.0	2.808567D-02	1.759223D+03
7.05000D+02	0.0	-6.690385D-01	0.0	1.225039D+04
THEOF	AICF	BITF	BICF	DFW
THEOR	AICR	BITR	BICR	LFFW
1.801962D+01	-5.004017D-01	2.800000D+00	2.800000D+00	2.876691D+03
1.836381D+01	-4.503842D-01	4.000000D+00	4.000000D+00	-3.738493D+02
THEIAC	DELTAB	DELIAS	DELTAR	DELTAC
1.819171D+01	-3.242715D+00	-1.434354D-02	-2.093533D-01	8.675746D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.263054D+04	9.685729D+02	1.661899D+01	2.762167D+03	9.748453D+02
1.235471D+04	7.267564D+02	3.408272D+01	2.117073D+03	1.025765D+03
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
2.439464D+04	-4.941309D+02	3.005964D+02	1.187386D+03	1.226255D+03
2.59531D+04	2.858487D+03	-8.207320D+03	8.411347D+02	1.304705D+03
XR	L/DE	SHPTOT	WFF	NMLB
2.917580D+03	7.384052D+00	2.630960D+03	2.631960D+03	5.243241D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	8.795365D-02	6.782317D-03	8.380443D-01	-7.686978D-02
5.841923D-02	8.744927D-02	7.216223D-03	8.385054D-01	-7.515433D-02
MUF	VF	DFFR	DFF	AOF
MUR	VR	DFRF		AOR
3.234926D-01	6.120732D+00	1.448341D+00	9.377109D-01	4.814665D+00
3.261590D-01	6.040123D+00	6.91124D-39		4.797673D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
4.489398D+00	1.583014D+00	-3.905801D-01	8.702220D+00	1.265376D+01
3.439462D+00	1.665722D+00	6.190119D-01	7.619642D+00	1.279867D+01
CAPVF	ALPHAF	BETAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
2.330737D+02	-1.190293D+01	6.348524D-18	3.525865D+02	4.760318D+00
2.346851D+02	-1.153862D+01	6.296624D-18	3.540365D+02	3.821587D+00

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTF	CTFP	A90F	
RMTB	CIRP	A90RA	
4.220026D-01	8.764939D-02	5.334493D-01	
4.202783D-01	8.685081D-02	5.517916D-01	

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
8.433131D+01	1.310586D+03	2.798854D+03	4.928828D-02
8.356295D+01	1.388268D+03	2.799854D+03	1.197705D+03

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
7.552682D+02	1.773500D+04	1.157010D+05	1.067690D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-4.846332D-02	1.047465D-01	6.143441D-02	2.171377D-01
-4.204899D-04	3.756922D-01	7.614798D-04	-9.793744D-02
4.634030D-02	-5.270051D-02	-2.749502D-02	1.079324D+01
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
1.947454D-02	-6.805586D-01	4.040836D-01	-7.873022D+00
7.434317D-03	-2.309952D+00	-2.264150D-02	1.731547D+00
-7.260229D-01	-4.850415D-01	1.076309D-01	-1.691000D+02
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-2.337730D-03	2.612902D-01	5.109058D-01	1.239089D-01
1.435766D-03	-1.309157D+00	-1.174860D-02	3.344081D-01
9.195315D-03	-3.890202D-01	4.776473D-04	2.141706D+00
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
3.321872D-03	-6.149747D-01	-4.418937D-02	4.838395D-03
-1.492191D-01	1.472928D-01	8.912626D-01	-3.475502D+01
-8.886902D-03	-9.240292D-02	5.859024D-03	-2.069872D+00
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
1.080134D-03	-4.450015D-01	-6.366107D-02	-1.601273D-02
-1.935327D-02	1.590369D-01	4.183074D-01	-4.507623D+00
-3.773720D-04	2.809824D-02	-1.396009D-01	-8.789474D-02
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
-3.756762D-04	-5.811501D-02	8.011623D-02	-2.921674D-03
-3.304962D-03	-1.919054D-01	1.614435D-02	-7.697678D-01
-1.324817D-03	-1.074388D-01	1.687527D-01	-3.085668D-01

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CIF	-0.821D-05	-0.579D-02	0.109D-03	0.255D-01	-0.143D-02	0.607D-01
CIR	0.654D-06	0.461D-03	0.936D-04	0.218D-01	0.218D-02	0.496D-01
CHF	0.155D-05	0.109D-02	0.931D-05	0.217D-02	-0.175D-03	0.756D-02
CHR	0.223D-05	0.157D-02	0.608D-05	0.142D-02	0.857D-04	0.562D-02
ALF	0.424D-03	0.299D+00	0.118D-02	0.275D+00	-0.907D-01	0.106D+01
ALR	0.524D-03	0.369D+00	0.102D-02	0.239D+00	-0.565D-01	0.958D+00
VFR	-0.355D-01	-0.250D+02	0.131D+00	0.305D+02	-0.177D+01	0.716D+02
VRR	-0.245D-01	-0.173D+02	0.112D+00	0.260D+02	0.264D+01	0.576D+02
LF			0.580D+02	0.135D+05		
DF			-0.605D+00	-0.141D+03		
MF			0.284D+03	0.661D+05		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.294D-05	-0.685D-03	-0.101D-03	-0.590D-04	0.532D-02
CYR	0.296D-05	0.688D-03	0.917D-04	-0.299D-04	0.527D-02
BIF	-0.217D-03	-0.504D-01	-0.643D-01	-0.164D-01	0.103D+01
BIR	0.310D-03	0.721D-01	0.707D-01	-0.121D-02	0.104D+01
YF	-0.985D+02	-0.229D+05			
LF	-0.183D+03	-0.426D+05			
NF	-0.344D+03	-0.802D+05			
CIF					-0.452D-03
CIR					-0.373D-03

FORCE = 0.241446D+07

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CASE 6

X	BICF	BICR	OMEGAF	OMEGAR
Z	0.114D+02	0.125D+02	0.0	0.0
M	0.676D+02	0.827D+02	0.0	0.0
Y	-0.118D+02	0.743D+01	0.0	0.0
L	0.500D+00	-0.444D+00	0.0	0.0
N	0.358D+00	-0.209D+00	0.0	0.0
	-0.584D+00	0.575D+00	0.0	0.0
CTF	-0.253D-01	0.232D-05	0.0	0.0
CTR	0.472D-02	-0.256D-01	0.0	0.0
CHF	-0.754D-02	0.409D-06	0.0	0.0
CHR	0.289D-03	-0.708D-02	0.0	0.0
AIF	-0.129D+01	0.806D-04	0.0	0.0
AIR	0.485D-01	-0.129D+01	0.0	0.0
VFR	-0.298D+02	-0.334D-01	0.0	0.0
VRR	0.580D+01	-0.300D+02	0.0	0.0
QF	-0.146D+02	0.114D-02	0.0	0.0
QR	0.421D+01	-0.171D+02	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELR	QFALPHA
	-0.394D-02	-0.554D+00	0.133D+01	0.237D+01
	0.872D-03	-0.229D+00	0.117D-02	0.203D+00
	0.809D-01	-0.112D+01	0.147D-02	0.188D+02
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELR	QRALPHA
	0.489D-02	0.898D+00	-0.131D+01	0.233D+01
	-0.109D-02	0.192D+01	0.109D-01	-0.254D+00
	0.820D-01	0.122D+01	0.543D-02	0.191D+02

CATALOG OF TRIM & STABILITY DERIVATIVE DATA

A-97 TRIM ANALYSIS (CH-46E)

GW = 24,300 lb CG = 6 in. fwd

<u>ALTITUDE</u>	<u>AIRSPEED</u>	<u>CLIMB RATE</u>	<u>SIDESLIP</u>	<u>DERIVATIVES</u>
8000 ft	0 kt	0 ft/min	0 deg	X
	20			
	40			X
	60			
	80			X
	93			X

V	RC	GW	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
0.0	0.0	2.430000D+04	1.871352D-03	1.255399D+04
4.400000D+01	0.0	2.700000D+02	5.780179D+00	5.774422D+02
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	6.239495D+00	0.0	0.0	1.264419D+04
7.050000D+02	0.0	-2.379150D-01	0.0	5.774361D+02
THEOF	AICF	BITF	BICF	DFW
THEOR	AICR	BITR	BICR	FFW
1.837373D+01	4.671129D-01	-2.500000D+00	-2.500000D+00	-4.206186D-14
1.866041D+01	4.121273D-02	-2.500000D+00	-2.500000D+00	-9.188731D+02
THEIAC	DELTAB	DELTAS	DELTAR	DELTAC
1.851707D+01	-2.243181D-01	1.418198D-01	9.618342D-02	8.927961D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.255399D+04	5.774422D+02	9.323496D+01	1.621741D+03	2.559812D+02
1.264419D+04	5.774361D+02	-1.052017D+01	1.590655D+03	-3.592356D+01
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHRP
2.619151D+04	-9.188731D+02	-2.054266D-14	-1.244907D-13	1.316579D+03
2.752142D+04	-4.206186D-14	1.102648D+03	6.177867D-13	1.383430D+03
XR	L/DE	SHPTOT	WFF	NMLB
2.470291D+03	0.0	2.800009D+03	2.801009D+03	0.0
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	1.132681D-01	9.253387D-03	6.507321D-01	-6.233546D-02
5.841923D-02	1.142206D-01	9.723241D-03	6.503524D-01	-6.536710D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
5.181262D-19	4.185191D+01	1.406733D-01	1.299000D+00	5.030955D+00
1.456358D-18	4.019554D+01	5.209670D-02		5.098750D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
2.634075D+00	4.156287D-01	2.369966D+00	7.663743D+00	6.380944D+00
2.583550D+00	-5.832747D-02	2.518245D+00	7.682487D+00	6.467200D+00
CAPVF	ALPHAF	BETAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
2.094569D+00	2.700000D+02	0.0	-6.865925D+00	2.666664D+00
5.887448D+00	2.700000D+02	0.0	-4.416450D+00	2.584208D+00

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTR	CIFP	A90F	
RMTR	CTRP	A90RA	
6.462660D-01	5.202221D-03	6.210360D+00	
6.467171D-01	5.202166D-03	6.392136D+00	

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
0.0	1.316579D+03	2.800009D+03	0.0
0.0	1.383430D+03	2.801009D+03	0.0

MAIN
ENTRY POINT= 000B5E58
STANDARD FIXUP TAKEN , EXECUTION CONTINUING

00009720 000B5E58 00743s08 000B4FF8

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
7.552682D+02	1.773500D+04	1.157010D+05	1.067690D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-2.617273D-02	-3.493415D+00	5.065764D-02	4.831579D-01
-7.947205D-05	1.392590D+00	-2.166678D-03	-2.529674D-04
9.357553D-02	-1.131020D-01	-4.635538D-02	2.978602D-01
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
4.867614D-03	3.958678D+01	2.936230D-02	-4.741352D+00
1.131791D-03	3.177530D-01	-1.386154D-03	3.602603D-03
-1.121650D+00	-3.568254D-02	-5.816346D-03	-3.570322D+00
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
2.028753D-04	4.993553D+00	2.694094D-01	3.366255D-03
-3.232944D-04	-5.378240D-01	1.957283D-04	-1.029078D-03
-1.084490D-01	-2.951252D-01	3.367071D-03	-3.452039D-01
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
-1.754060D-04	-1.088243D+00	2.180337D-03	1.964942D-02
-2.872240D-01	9.962666D-03	9.148049D-01	-9.142624D-01
2.874660D-03	-1.899038D-01	-6.269313D-03	9.150329D-03
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
-2.144532D-04	-9.958872D-01	-5.058596D-02	-7.354727D-03
-1.164418D-02	1.723979D-01	4.266191D-01	-3.706459D-02
8.506953D-03	-1.661526D-02	-1.482865D-01	2.707847D-02
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
1.761189D-04	3.013900D-01	5.894740D-02	-1.186232D-03
2.020441D-03	-2.127605D-01	1.628288D-02	6.431265D-03
-1.006997D-02	-1.098490D-01	1.738691D-01	-3.205369D-02

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	-0.375D-05	-0.264D-02	0.356D-04	0.113D-03	-0.751D-03	0.441D-01
CTR	-0.139D-05	-0.978D-03	0.435D-03	0.139D-02	0.702D-03	0.432D-01
CHF	0.423D-05	0.298D-02	0.228D-05	0.725D-05	-0.325D-03	0.205D-02
CHR	0.452D-05	0.319D-02	0.196D-04	0.625D-04	-0.274D-03	0.200D-02
AIF	0.909D-02	0.641D+01	0.908D-02	0.289D-01	-0.948D-01	0.380D-02
AIR	0.904D-02	0.637D+01	0.912D-02	0.290D-01	-0.980D-01	0.376D-02
VER	-0.920D-01	-0.649D+02	0.500D+00	0.159D+01	-0.101D+02	0.143D+03
VAR	-0.539D-01	-0.380D+02	0.342D+01	0.109D+02	0.974D+01	0.130D+03
LF			-0.456D+02	-0.145D+03		
DF			-0.209D-14	-0.665D-14		
MF			0.548D+02	0.174D+03		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.442D-05	-0.141D-04	-0.281D-03	-0.114D-03	0.690D-02
CYR	0.443D-05	0.141D-04	0.151D-03	-0.388D-04	0.696D-02
BIF	0.909D-02	0.289D-01	-0.922D-01	-0.224D-01	0.104D+01
BIR	-0.905D-02	-0.288D-01	0.980D-01	-0.150D-02	0.104D+01
YF	-0.200D+03	-0.637D+03			
LF	-0.200D+02	-0.637D+02			
NF	0.240D+03	0.764D+03			
CTF					-0.138D-04
CTR					0.414D-05

FORCE = 0.190004D+07

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X	BICF	BICR	OMEGAF	OMEGAR
Z	0.171D+02	0.174D+02	0.0	0.0
M	-0.274D+01	0.204D+01	0.0	0.0
Y	-0.130D+01	-0.133D+01	0.0	0.0
L	0.488D+00	-0.505D+00	0.0	0.0
N	0.178D+00	-0.282D+00	0.0	0.0
	0.612D-01	0.550D-01	0.0	0.0
CTF	0.533D-04	-0.714D-05	0.0	0.0
CTR	-0.547D-06	-0.482D-04	0.0	0.0
CHF	-0.690D-02	-0.138D-05	0.0	0.0
CHR	0.288D-06	-0.696D-02	0.0	0.0
AIF	-0.104D+01	-0.318D-03	0.0	0.0
AIR	0.871D-04	-0.104D+01	0.0	0.0
VFR	0.287D+00	0.114D+00	0.0	0.0
VRR	-0.523D-01	0.232D+00	0.0	0.0
QF	0.497D-02	0.324D-02	0.0	0.0
QR	-0.133D-02	-0.739D-02	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELR	QFALPHA
	-0.111D-02	0.289D+00	0.914D+00	0.183D+01
	-0.976D-03	0.125D+01	0.207D-03	-0.311D-02
	0.513D-02	-0.978D+00	-0.421D-04	0.163D-01
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELR	QRALPHA
	-0.749D-03	-0.110D+02	-0.940D+00	0.189D+01
	0.922D-03	0.148D+01	0.291D-04	0.294D-02
	0.321D+00	0.104D+01	-0.627D-04	0.102D+01

V	RC	GW	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
2.000000D+01	0.0	2.430000D+04	1.871352D-03	3.374878D+02
4.400000D+01	3.987624D+00	-5.017435D+01	4.062353D+00	1.223911D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	6.239495D+00	0.0	-1.544210D-02	7.000224D+03
7.050000D+02	0.0	-2.465678D-01	0.0	1.049383D+04
THEOF	AICF	B1TF	B1CF	DFW
THEOR	AICR	B1TR	B1CR	LEFW
1.738996D+01	1.669134D+00	-2.500000D+00	-2.500000D+00	2.211345D+01
1.937127D+01	8.730811D-01	-2.500000D+00	-2.500000D+00	-5.479896D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.838062D+01	-1.550323D+00	2.483667D-01	4.956809D-01	8.822183D+00
TF	NF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.221309D+04	8.661433D+02	3.098580D+02	2.284174D+03	8.372258D+02
1.258310D+04	8.883374D+02	2.054735D+02	2.468112D+03	6.760378D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
2.196801D+04	-5.451252D+02	1.030482D+01	5.598518D+01	1.104274D+03
3.031150D+04	6.016766D+01	-1.294720D+03	-2.180343D+02	1.523679D+03
XR	L/DE	SHPTOT	WFF	NMLB
8.521357D+01	5.481316D-01	2.727954D+03	2.728954D+03	7.328817D-03
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	1.104907D-01	7.761234D-03	6.825265D-01	-5.446589D-02
5.841923D-02	1.129172D-01	1.070897D-02	6.851425D-01	-7.769299D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF	DF	AOR
4.769162D-02	3.507234D+01	6.939398D-01	1.342147D+00	5.112501D+00
4.784699D-02	2.864144D+01	2.531074D-03		5.107701D+00
A1F	B1F	BETAOF	B180F	A270F
A1R	B1R	BETAOR	B180R	A270R
3.711304D+00	1.359493D+00	1.138426D+00	8.744326D+00	7.049743D+00
4.010636D+00	1.097719D+00	1.086741D+00	9.108996D+00	7.864021D+00
CAPVF	ALPHA	BETAFW	AT1PF	BPTPF
CAPVR	ALPHAR	BETARW	AT1PR	BPTPR
3.378592D+01	-5.636087D+00	3.600000D+02	-1.801072D+00	3.952468D+00
4.265861D+01	-3.774472D+01	3.600000D+02	9.982600D-01	4.158147D+00

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CASE 5

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMIF	CTFP	A90F	
RMIR	CTRP	A90RA	
6.139091D-01	1.102631D-01	5.228496D+00	
6.142615D-01	9.453969D-02	5.406369D+00	

3

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
0.0	1.104274D+03	2.727954D+03	7.328817D-03
0.0	1.523679D+03	2.728954D+03	1.780902D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

CASE 8

PAGE 3

V	RC	GW	RH0	XF LW
FE	ALPHA	ALFF	THETA	LF LW
4.00000D+01	0.0	2.430000D+04	1.871352D-03	4.265085D+02
4.400000D+01	2.553400D+00	-1.847231D+01	2.589720D+00	1.198017D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	6.239495D+00	0.0	-9.292161D-03	5.128600D+03
7.050000D+02	0.0	-2.131963D-01	0.0	1.161051D+04
THEOF	AICF	B1TF	B1CF	DFW
THEOR	AICR	B1TR	B1CR	LFFW
1.618684D+01	2.208384D+00	-2.500000D+00	-2.500000D+00	1.667622D+02
1.957278D+01	1.651745D+00	-2.500000D+00	-2.500000D+00	-3.696623D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.787981D+01	-2.931093D+00	1.802104D-01	7.770139D-01	8.433962D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.194381D+04	1.025555D+03	4.804642D+02	2.981971D+03	1.643872D+03
1.263475D+04	1.212206D+03	4.122872D+02	3.368952D+03	1.364229D+03
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.611841D+04	-3.618659D+02	2.411020D+01	1.079782D+02	8.102300D+02
3.082877D+04	1.830652D+02	-1.946606D+03	-1.830697D+02	1.549682D+03
XR	L/DE	SHPTOT	WFF	NFLB
1.975224D+02	1.225471D+00	2.459912D+03	2.460912D+03	1.625414D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	1.078600D-01	5.694587D-03	7.151523D-01	-4.504409D-02
5.841923D-02	1.138041D-01	1.089172D-02	7.193278D-01	-8.305573D-02
MUF	VF	DFFR	DFF	AOF
MUR	VR	DFRF		AOR
9.512295D-02	2.357677D+01	1.381818D+00	1.154039D+00	4.708916D+00
9.553795D-02	2.071199D+01	6.041651D-41		5.188487D+00
A1F	B1F	BETA0F	B180F	A270F
A1R	B1R	BETA0R	B180R	A270R
4.847472D+00	2.670047D+00	-1.969563D-01	9.507699D+00	7.672734D+00
5.478358D+00	2.215589D+00	-3.925981D-01	1.060496D+01	9.316301D+00
CAPVF	ALPHA F	BETAFW	AT1FF	BPTFF
CAPVR	ALPHA R	BETARW	AT1PR	BPTPR
6.755760D+01	-6.946600D+00	3.600000D+02	-2.099128D+00	5.534179D+00
7.724433D+01	-2.931235D+01	3.600000D+02	1.031759D+00	5.909420D+00

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTR	CTFP	A90F	
5.824872D-01	CTRP	A90RA	
5.816741D-01	1.079303D-01	3.551330D+00	
	1.045999D-01	4.412854D+00	

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
3.049056D+00	8.132791D+02	2.465916D+03	1.621458D-02
2.954973D+00	1.552637D+03	2.466916D+03	3.940143D+02

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
7.552682D+02	1.773500D+04	1.157010D+05	1.067690D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-2.368908D-02	1.864320D-01	5.142304D-02	1.002502D-01
-8.675217D-04	1.309003D+00	-3.920067D-03	-5.865479D-02
1.443661D-02	-1.046566D-01	-4.869243D-02	9.760865D-01
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
-1.147728D-01	-5.201121D+00	4.052384D-01	-4.412157D+00
4.247164D-03	-1.147957D+00	1.307289D-03	2.871588D-01
-4.806240D-01	-4.529105D-01	4.254346D-02	-3.249590D+01
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-1.567277D-03	-5.020724D-01	3.098325D-01	7.743218D-02
-1.424419D-03	-9.041313D-01	-3.846538D-03	-9.630769D-02
-3.130138D-03	-3.272410D-01	3.661124D-03	-2.116346D-01
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
1.524279D-04	-1.681745D+00	1.026548D-01	4.167162D-02
-6.095354D-02	-1.542076D-01	8.868036D-01	-4.121184D+00
6.070000D-04	-2.586146D-01	-5.190960D-02	4.104042D-02
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
-2.362392D-04	-1.007651D+00	-8.288472D-03	6.826347D-03
-1.508729D-02	8.448938D-02	4.205206D-01	-1.020080D+00
3.552349D-04	-4.329198D-02	-1.607598D-01	2.401810D-02
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
1.298259D-04	8.402820D-03	5.883415D-02	-6.638341D-03
7.320410D-04	-2.131155D-01	1.173230D-02	4.949468D-02
-1.980788D-04	-9.308699D-02	1.690719D-01	-1.339248D-02

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	0.157D-04	0.111D-01	0.821D-04	0.555D-02	-0.115D-02	0.443D-01
CTR	0.280D-04	0.197D-01	0.101D-03	0.683D-02	0.169D-02	0.346D-01
CHF	0.512D-05	0.361D-02	0.905D-05	0.612D-03	-0.465D-03	0.542D-02
CHR	0.761D-05	0.537D-02	0.113D-04	0.764D-03	-0.454D-04	0.444D-02
ALF	0.599D-03	0.422D+00	0.316D-03	0.213D-01	-0.951D-01	0.275D+00
AIR	0.777D-03	0.548D+00	0.352D-03	0.238D-01	-0.926D-01	0.260D+00
VFR	-0.216D+00	-0.152D+03	0.348D+00	0.235D+02	-0.568D+01	0.146D+03
VRR	-0.637D-01	-0.449D+02	0.409D+00	0.277D+02	0.718D+01	0.734D+02
LF			0.132D+02	0.891D+03		
DF			-0.515D-01	-0.348D+01		
MF			0.465D+02	0.314D+04		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.384D-05	-0.260D-03	-0.340D-03	-0.124D-03	0.650D-02
CYR	0.481D-05	0.325D-03	0.329D-03	-0.217D-04	0.698D-02
B1F	0.676D-03	0.457D-01	-0.905D-01	-0.185D-01	0.103D+01
B1R	-0.686D-03	-0.464D-01	0.102D+00	-0.526D-02	0.104D+01
YF	-0.296D+02	-0.200D+04			
LF	-0.796D+02	-0.538D+04			
NF	0.677D+02	0.458D+04			
CTF					-0.220D-03
CTR					-0.246D-03

FORCE = 0.190004D+07

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X	BICF	BICR	OMEGAF	OMEGAR
Z	0.152D+02	0.172D+02	0.0	0.0
M	0.133D+02	0.179D+02	0.0	0.0
Y	-0.330D+01	0.354D+00	0.0	0.0
L	-0.367D+00	0.451D-01	0.0	0.0
N	-0.136D+00	-0.552D-01	0.0	0.0
	0.916D-03	0.969D-01	0.0	0.0
CTF	-0.589D-02	-0.855D-05	0.0	0.0
CTR	0.159D-02	-0.634D-02	0.0	0.0
CHF	-0.709D-02	-0.183D-05	0.0	0.0
CHR	0.173D-03	-0.767D-02	0.0	0.0
AIF	-0.104D+01	-0.252D-03	0.0	0.0
AIR	0.443D-02	-0.106D+01	0.0	0.0
VFR	-0.194D+02	0.114D+00	0.0	0.0
VRR	0.699D+01	-0.170D+02	0.0	0.0
QF	0.123D+01	0.900D-02	0.0	0.0
QR	0.638D+00	-0.321D+01	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELR	QFALPHA
	-0.923D-02	0.100D+01	0.676D+00	0.137D+01
	0.545D-03	0.369D+01	-0.748D-02	0.368D-01
	-0.168D-01	-0.434D+00	-0.168D-01	-0.114D+01
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBEIA
	QRW	QRR	QRDELR	QRALPHA
	0.526D-02	0.496D-01	-0.119D+01	0.220D+01
	0.105D-02	0.424D+01	0.994D-02	0.712D-01
	0.475D-01	0.111D+01	-0.211D-01	0.321D+01

V	RC	GM	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
6.000000D+01	0.0	2.430000D+04	1.871352D-03	4.106842D+02
4.400000D+01	7.023293D+00	-2.365887D+00	7.084245D+00	1.256752D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	6.239495D+00	0.0	-2.797723D-02	3.592277D+03
7.050000D+02	0.0	-2.290885D-01	0.0	1.124784D+04
THEOF	AICF	B1TF	B1CF	DFW
THEOR	AICR	B1TR	B1CR	LFFW
1.612595D+01	1.367398D+00	2.800000D+00	2.800000D+00	4.134796D+02
1.883022D+01	1.055073D+00	4.000000D+00	4.000000D+00	-6.886911D+01
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.747808D+01	-3.227125D+00	9.777577D-02	5.132566D-01	8.122545D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.257353D+04	1.327826D+02	3.669268D+02	3.464549D+02	1.456623D+03
1.180741D+04	-5.856351D+01	3.089731D+02	-1.472476D+02	1.294475D+03
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.491656D+04	-1.779503D+01	3.859397D+01	1.601414D+02	7.498162D+02
2.631137D+04	4.187979D+02	-9.422170D+02	1.275432D+02	1.322604D+03
XR	L/DE	SHPTOT	WFF	NMLB
4.644476D+02	2.145451D+00	2.172420D+03	2.173420D+03	2.760626D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	1.133735D-01	5.269977D-03	7.420380D-01	-3.143366D-02
5.841923D-02	1.060143D-01	9.295732D-03	7.427006D-01	-6.706903D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
1.436053D-01	1.778114D+01	1.791363D+00	9.952638D-01	4.862858D+00
1.437396D-01	1.546852D+01	7.145039D-39		4.716960D+00
A1F	B1F	BETAOF	B180F	A270F
A1R	B1R	BETAOR	B180R	A270R
5.625323D-01	2.365724D+00	4.178490D+00	5.301515D+00	9.006947D+00
-2.390799D-01	2.102252D+00	4.831982D+00	4.347880D+00	9.597125D+00
CAPVF	ALPHAF	BETAFW	AT1PF	BPTPF
CAPVR	ALPHAR	BETARW	AT1PR	BPTPR
1.013364D+02	-2.476707D+00	3.600000D+02	-1.914175D+00	2.431685D+00
1.062122D+02	-1.742799D+01	3.600000D+02	-2.157868D-01	2.115803D+00

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XFF	ZFF	NFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTF	CTFP	A90F	
RMTB	CTRP	A90RA	
5.567568D-01	1.132218D-01	2.815044D+00	
5.529494D-01	1.013327D-01	3.214087D+00	

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	NFF	RP
9.428037D+00	7.592443D+02	2.190286D+03	2.738118D-02
8.438027D+00	1.331042D+03	2.191286D+03	6.653628D+02

STABILITY NOT CALCULATED FOR THIS CASE. SKIPPING TO NEXT CASE

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V	RC	GM	RHO	XF	LW
FE	ALPHA	ALFF	THETA	LF	LW
8.000000D+01	0.0	2.430000D+04	1.871352D-03	5.887930D+02	
4.400000D+01	5.176306D+00	7.504423D-02	5.256787D+00	1.234440D+04	
VTF	CGF	BETAF	PSI	XR	LW
VTR	CGL	PHI	GAMMA	LR	LW
7.050000D+02	6.239495D+00	0.0	-2.209769D-02	2.261286D+03	
7.050000D+02	0.0	-2.475294D-01	0.0	1.168215D+04	
THEOF	AICF	B1IF	BICF	DFW	
THEOR	AICR	B1IR	BICR	LFFW	
1.612886D+01	9.207565D-01	2.800000D+00	2.800000D+00	7.542352D+02	
1.812431D+01	6.623985D-01	4.000000D+00	4.000000D+00	6.481296D+01	
THETAC	DELTAB	DELTAS	DELTAR	DELTAC	
1.712659D+01	-3.267176D+00	8.724062D-02	3.208823D-01	7.850069D+00	
TF	HF	YF	MHF	LHF	
TR	HR	YR	MHR	LHR	
1.235365D+04	3.435403D+02	2.734303D+02	9.756474D+02	1.321810D+03	
1.189810D+04	1.455363D+02	2.289832D+02	5.038679D+02	1.174507D+03	
QF	LFZ	YFY	LF	RHPF	
QR	DFX	MF	NF	RHPR	
1.449852D+04	1.325963D+02	6.120329D+01	2.190746D+02	7.288024D+02	
2.314532D+04	7.453118D+02	-8.143195D+02	2.776220D+02	1.163455D+03	
XR	L/DE	SHPTOT	WFF	NFLB	
8.219768D+02	3.334383D+00	1.992257D+03	1.993257D+03	4.013531D-02	
SIGOF	CTSF	CPSF	AMTF	LANDAF	
SIGOR	CTSR	CPSR	AMTR	LANDAR	
5.841923D-02	1.109187D-01	5.122284D-03	7.732613D-01	-3.321600D-02	
5.841923D-02	1.070131D-01	8.177177D-03	7.738014D-01	-5.707449D-02	
MUF	VF	DFFR	DFP	AOF	
MUR	VR	DFRF		AOR	
1.911073D-01	1.323061D+01	1.780613D+00	9.382606D-01	4.718040D+00	
1.915557D-01	1.237836D+01	7.082849D-39		4.676494D+00	
A1F	B1F	BETAOF	B180F	A270F	
A1R	B1R	BETAOR	B180R	A270R	
1.584316D+00	2.146665D+00	2.915775D+00	6.089191D+00	1.006178D+01	
8.181354D-01	1.907346D+00	3.622007D+00	5.267502D+00	1.062308D+01	
CAPVF	ALPHAF	BETAFW	AT1PF	BPTPF	
CAPVR	ALPHAR	BETARW	AT1PR	BPTPR	
1.351152D+02	-4.323694D+00	3.600000D+02	-2.739378D+00	2.668001D+00	
1.378903D+02	-1.165593D+01	3.600000D+02	-1.005559D+00	2.075407D+00	

CASE 9

PAGE 4

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMIF	CTFP	A90F	
RMTR	CIRP	A90RA	
5.201583D-01	1.112116D-01	1.997137D+00	
5.209320D-01	1.052454D-01	2.283681D+00	

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
1.976489D+01	7.485673D+02	2.030727D+03	3.937538D-02
1.870455D+01	1.182159D+03	2.031727D+03	9.568217D+02

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
7.552682D+02	1.773500D+04	1.157010D+05	1.067690D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-2.946675D-02	7.843215D-02	-1.338661D-02	3.969996D-01
-6.303156D-04	1.422382D+00	-3.962626D-03	-8.484605D-02
4.413993D-02	-8.419820D-03	-5.110867D-02	5.941624D+00
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
-2.882143D-02	-5.825417D-01	5.220759D-01	-4.807781D+00
3.402187D-03	-2.045097D+00	-5.050880D-03	4.579643D-01
-4.439332D-01	-5.346835D-01	7.668392D-02	-5.975732D+01
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-4.315887D-03	1.167121D-01	3.727826D-01	1.145967D-01
-5.737013D-04	-1.109026D+00	-9.014073D-03	-7.722526D-02
1.114274D-02	-3.307616D-01	-4.505125D-04	1.499911D+00
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
5.095134D-04	-1.460986D+00	6.907171D-02	2.298036D-02
-7.772263D-02	-1.628326D-01	8.646073D-01	-1.046215D+01
3.187897D-03	-3.107601D-01	1.416222D-02	4.291191D-01
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
-1.578356D-04	-8.702888D-01	-1.435776D-02	-1.035125D-03
-1.304731D-02	4.334222D-02	4.067831D-01	-1.756283D+00
4.129140D-04	-8.268930D-02	-1.339002D-01	5.558187D-02
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
-6.543324D-05	-2.495983D-02	5.682699D-02	3.472305D-04
-2.094634D-03	-1.544498D-01	1.647747D-02	-2.819562D-01
-1.692587D-04	-9.486930D-02	1.641099D-01	-2.278371D-02

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	-0.626D-05	-0.441D-02	0.100D-03	0.135D-01	-0.134D-02	0.520D-01
CTR	0.144D-04	0.102D-01	0.637D-04	0.858D-02	0.224D-02	0.343D-01
CHF	0.288D-05	0.203D-02	0.519D-05	0.699D-03	-0.382D-03	0.356D-02
CHR	0.384D-05	0.271D-02	0.201D-05	0.270D-03	-0.138D-03	0.223D-02
AIF	0.501D-03	0.353D+00	0.694D-03	0.934D-01	-0.992D-01	0.582D+00
AIR	0.693D-03	0.488D+00	0.466D-03	0.627D-01	-0.825D-01	0.480D+00
VFR	-0.107D+00	-0.752D+02	0.201D+00	0.271D+02	-0.298D+01	0.104D+03
VRR	-0.532D-01	-0.375D+02	0.129D+00	0.173D+02	0.484D+01	0.618D+02
LF			0.250D+02	0.337D+04		
DF			-0.638D+00	-0.859D+02		
NF			0.142D+03	0.191D+05		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.376D-05	-0.506D-03	-0.337D-03	-0.131D-03	0.661D-02
CYR	0.392D-05	0.528D-03	0.244D-03	-0.724D-05	0.648D-02
BIF	-0.373D-03	-0.502D-01	-0.864D-01	-0.224D-01	0.102D+01
BIR	0.529D-03	0.712D-01	0.937D-01	0.249D-02	0.103D+01
YF	-0.441D+02	-0.594D+04			
LF	-0.655D+02	-0.881D+04			
NF	-0.213D+03	-0.286D+05			
CTF					-0.563D-03
CTR					-0.225D-03

FORCE = 0.1900004D+07

X	BICF	BICR	OMEGAF	OMEGAR
Z	0.133D+02	0.127D+02	0.0	0.0
M	0.267D+02	0.363D+02	0.0	0.0
Y	-0.630D+01	0.259D+01	0.0	0.0
L	-0.455D+00	0.152D+00	0.0	0.0
N	-0.214D+00	-0.457D-01	0.0	0.0
	-0.399D-01	0.155D+00	0.0	0.0
CTF	-0.138D-01	-0.877D-05	0.0	0.0
CTR	0.484D-02	-0.139D-01	0.0	0.0
CHF	-0.718D-02	-0.628D-07	0.0	0.0
CHR	0.127D-03	-0.680D-02	0.0	0.0
AIF	-0.110D+01	0.107D-03	0.0	0.0
AIR	0.298D-01	-0.112D+01	0.0	0.0
VFR	-0.276D+02	0.429D-01	0.0	0.0
VRR	0.105D+02	-0.267D+02	0.0	0.0
QF	0.980D+00	-0.194D-02	0.0	0.0
QR	0.175D+01	-0.536D+01	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELR	QFALPHA
	-0.143D-02	0.368D+00	0.736D+00	0.153D+01
	0.264D-03	-0.123D+01	-0.915D-02	0.356D-01
	-0.135D-01	-0.624D+00	-0.168D-01	-0.182D+01
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELR	QRALPHA
	0.384D-02	-0.210D+00	-0.109D+01	0.191D+01
	0.168D-03	0.875D+00	0.789D-02	0.226D-01
	0.234D-01	0.103D+01	-0.115D-01	0.315D+01

V	RC	GM	RHO	XF LM
FE	ALPHA	ALFF	THEIA	LF LM
9.300000D+01	0.0	2.430000D+04	1.871352D-03	7.162766D+02
4.400000D+01	3.821924D+00	7.872147D-02	3.888306D+00	1.221471D+04
VTF	CGF	BETAF	PSI	XR LM
VTR	CGL	PHI	GAMMA	LR LM
7.050000D+02	6.239495D+00	0.0	-1.795635D-02	1.850197D+03
7.050000D+02	0.0	-2.784180D-01	0.0	1.183808D+04
THEOF	AICF	B1TF	BICF	DFW
THEOR	AICR	B1TR	B1CR	LFFW
1.648116D+01	6.770150D-01	2.800000D+00	2.800000D+00	1.020724D+03
1.811330D+01	4.297101D-01	4.000000D+00	4.000000D+00	1.124065D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.729723D+01	-3.280239D+00	7.990457D-02	2.166356D-01	7.982349D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.222564D+04	4.957485D+02	2.201213D+02	1.456174D+03	1.265107D+03
1.197794D+04	3.039815D+02	1.814971D+02	9.850513D+02	1.135818D+03
QF	LFZ	YFY	LF	RHPF
QR	DFX	NF	NF	RHPR
1.579628D+04	1.801936D+02	8.301411D+01	2.969922D+02	7.940375D+02
2.285180D+04	1.010962D+03	-1.102734D+03	3.767269D+02	1.148700D+03
XR	L/DE	SHPTOT	WFF	NMLB
1.076813D+03	3.999328D+00	2.042737D+03	2.043737D+03	4.550487D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	1.109974D-01	5.580780D-03	7.936047D-01	-3.808819D-02
5.841923D-02	1.086326D-01	8.073475D-03	7.941416D-01	-5.596739D-02
MUF	VF	DFFR	DF	A0F
MUR	VR	DFRF		A0R
2.217032D-01	1.131157D+01	1.758982D+00	9.253382D-01	4.729045D+00
2.224537D-01	1.085195D+01	1.758824D-39		4.726753D+00
A1F	B1F	BETA0F	B180F	A270F
A1R	B1R	BETA0R	B180R	A270R
2.364996D+00	2.054538D+00	2.043338D+00	6.802501D+00	1.104877D+01
1.599591D+00	1.844494D+00	2.783285D+00	6.016881D+00	1.158482D+01
CAPVF	ALPHAF	BETAFW	AT1PF	BPTPF
CAPVR	ALPHAR	BETARW	AT1PR	BPTPR
1.570714D+02	-5.678076D+00	3.600000D+02	-3.313080D+00	3.132783D+00
1.594172D+02	-1.033677D+01	3.600000D+02	-1.578485D+00	2.441485D+00

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMIF	CTFP	A90F	
RMIR	CTRP	A90RA	
5.003014D-01	1.100432D-01	1.610603D+00	
5.003868D-01	1.066502D-01	1.631345D+00	

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
3.066417D+01	8.247017D+02	2.103120D+03	4.419899D-02
2.971867D+01	1.178419D+03	2.104120D+03	1.074036D+03

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
7.552682D+02	1.773500D+04	1.157010D+05	1.067690D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-3.435079D-02	8.662851D-02	-5.610748D-03	3.855619D-01
-6.099186D-04	1.266612D+00	-2.436575D-03	-9.561267D-02
4.308540D-02	-2.927465D-02	-6.568262D-02	6.754197D+00
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
-1.452080D-02	-8.345868D-01	4.780231D-01	-5.120313D+00
3.208620D-03	-1.999974D+00	-8.297049D-03	5.029929D-01
-4.839297D-01	-4.724182D-01	8.741440D-02	-7.586228D+01
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-3.491434D-03	1.084934D-01	3.813694D-01	1.114033D-01
-3.948151D-04	-1.102783D+00	-7.099947D-03	-6.189241D-02
9.672471D-03	-3.335891D-01	4.817559D-03	1.516286D+00
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
7.572990D-04	-1.391790D+00	4.469496D-02	1.907344D-02
-8.691910D-02	-8.066070D-02	8.703413D-01	-1.362570D+01
2.317275D-03	-2.628286D-01	2.702547D-02	3.632631D-01
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
-1.396008D-04	-8.456736D-01	-2.861451D-02	-2.636984D-03
-1.371269D-02	8.471056D-02	4.101699D-01	-2.149643D+00
-4.456702D-04	-5.880907D-02	-1.218905D-01	-6.986461D-02
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
2.398348D-05	-1.922782D-02	6.499081D-02	-1.779829D-03
-2.492884D-03	-1.758550D-01	1.585044D-02	-3.907920D-01
1.028445D-04	-9.674051D-02	1.617682D-01	1.612222D-02

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	-0.770D-05	-0.543D-02	0.103D-03	0.162D-01	-0.136D-02	0.542D-01
CTR	0.101D-04	0.711D-02	0.741D-04	0.116D-01	0.223D-02	0.376D-01
CHF	0.286D-05	0.202D-02	0.605D-05	0.948D-03	-0.341D-03	0.412D-02
CHR	0.407D-05	0.287D-02	0.342D-05	0.536D-03	0.121D-03	0.264D-02
AIF	0.492D-03	0.347D+00	0.792D-03	0.124D+00	-0.142D+00	0.682D+00
AIR	0.668D-03	0.471D+00	0.593D-03	0.929D-01	-0.811D-01	0.576D+00
VFR	-0.838D-01	-0.591D+02	0.181D+00	0.284D+02	-0.247D+01	0.941D+02
VRR	-0.465D-01	-0.328D+02	0.130D+00	0.203D+02	0.413D+01	0.612D+02
LF			0.293D+02	0.459D+04		
DF			-0.730D+00	-0.114D+03		
MF			0.166D+03	0.260D+05		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.374D-05	-0.586D-03	-0.302D-03	-0.119D-03	0.663D-02
CYR	0.392D-05	0.615D-03	0.251D-03	-0.147D-04	0.638D-02
BIF	-0.323D-03	-0.506D-01	-0.853D-01	-0.213D-01	0.103D+01
BIR	0.460D-03	0.722D-01	0.929D-01	0.127D-02	0.978D+00
YF	-0.511D+02	-0.801D+04			
LF	-0.772D+02	-0.121D+05			
NF	-0.256D+03	-0.402D+05			
CTF					-0.420D-03
CTR					-0.485D-03

FORCE = 0.190004D+07

X	BICF	BICR	OMEGAF	OMEGAR
Z	0.126D+02	0.124D+02	0.0	0.0
M	0.306D+02	0.429D+02	0.0	0.0
Y	-0.710D+01	0.329D+01	0.0	0.0
L	-0.373D+00	-0.129D-01	0.0	0.0
N	-0.127D+00	-0.158D+00	0.0	0.0
	-0.144D+00	0.274D+00	0.0	0.0
CTF	-0.164D-01	-0.134D-05	0.0	0.0
CTR	-0.512D-02	-0.165D-01	0.0	0.0
CHF	-0.738D-02	-0.208D-06	0.0	0.0
CHR	0.194D-03	-0.701D-02	0.0	0.0
AIF	-0.113D+01	-0.362D-04	0.0	0.0
AIR	0.359D-01	-0.115D+01	0.0	0.0
VFR	-0.285D+02	0.164D-01	0.0	0.0
VRR	0.952D+01	-0.280D+02	0.0	0.0
QF	-0.212D+01	0.351D-03	0.0	0.0
QR	0.192D+01	-0.855D+01	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELR	QFALPHA
	-0.419D-02	0.204D+00	0.863D+00	0.181D+01
	0.168D-03	0.938D+00	-0.118D-01	0.263D-01
	0.335D-02	-0.700D+00	-0.170D-01	0.525D+00
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELR	QRALPHA
	-0.225D-02	-0.153D+00	-0.120D+01	0.211D+01
	-0.463D-04	0.142D+01	0.165D-01	-0.726D-02
	0.254D-01	0.106D+01	0.385D-01	0.398D+01

CATALOG OF TRIM & STABILITY DERIVATIVE DATA

A-97 TRIM ANALYSIS (CH-46E)

GW = 24,300 lb CG = 6 in. fwd

<u>ALTITUDE</u>	<u>AIRSPEED</u>	<u>CLIMB RATE</u>	<u>SIDESLIP</u>	<u>DERIVATIVES</u>
0 ft	60 kt	-2089 ft/min	0 deg	
	80	-2108		X
	100	-2390		
	120	-2934		
	60	1533		
	80	1412		X
	100	1146		
	120	674		

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V	RC	GW	RHO	XF	
FE	ALPHA	ALFF	THETA	LM	
6.350000D+01	-2.089000D+03	2.430000D+04	2.378000D-03	LF	-3.120581D+03
4.400000D+01	2.119841D+01	1.561378D+01	2.326392D+00	LM	1.083410D+04
VTF	CGF	BETAF	PSI	XR	
VTR	CGL	PHI	GAMMA	LR	
7.050000D+02	6.239495D+00	0.0	-3.550740D-02	LM	-2.477579D+03
7.050000D+02	0.0	-9.239785D-02	-1.894364D+01		1.189238D+04
THEOF	AICF	BIIF	BICF	DFW	
THEOR	AICR	BITR	BICR	LFFW	
9.685257D+00	5.681304D-01	-2.500000D+00	-2.500000D+00		7.543292D+02
1.123737D+01	4.796181D-01	-2.500000D+00	-2.500000D+00		6.865105D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC	
1.046131D+01	-2.575990D+00	1.280588D-02	2.173720D-01		2.683189D+00
TF	HF	YF	MHF	LHF	
TR	HR	YR	MHR	LHR	
1.124179D+04	8.590383D+02	1.061656D+02	2.554957D+03		7.650016D+02
1.210475D+04	1.020882D+03	1.078319D+02	2.811086D+03		7.924231D+02
QF	LFZ	YFY	LF	RHPF	
QR	DFX	MF	NF	RHPR	
-3.097873D+03	9.128214D+02	4.062012D+01	-5.658888D+01		-1.557220D+02
5.345944D+02	4.550453D+02	4.376055D+03	2.435215D+01		2.687266D+01
XR	L/DE	SHPTOT	WFF	NMLB	
-7.079337D+03	3.505791D+00	-2.884932D+01	-2.784932D+01		-2.156632D+00
SIGOF	CTSF	CPSF	AMTF	LAMDAF	
SIGOR	CTSR	CPSR	AMTR	LAMDAR	
5.841923D-02	7.944961D-02	-8.612860D-04	7.247736D-01		1.340431D-02
5.841923D-02	8.646715D-02	1.486306D-04	7.243611D-01		-1.069496D-03
MUF	VF	DFFR	DF	AOF	
MUR	VR	DFRF		AOR	
1.489645D-01	1.229513D+01	1.109084D+00	8.427225D-01		3.863651D+00
1.474773D-01	1.342345D+01	0.0			4.382913D+00
AIF	BIF	BETAOF	B180F	A270F	
AIR	BIR	BETAOR	B180R	A270R	
4.152001D+00	1.242196D+00	-3.528352D-01	7.934473D+00		4.434118D+00
4.569074D+00	1.286730D+00	-2.712994D-01	8.856597D+00		5.501451D+00
CAPVF	ALPHAF	BETAFW	ATIPF	BPTPF	
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR	
1.072477D+02	1.169841D+01	3.600000D+02	1.585041D+01		4.333839D+00
1.047406D+02	6.947520D+00	3.600000D+02	1.876749D+01		4.746800D+00

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CASE 7

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMIF	CIFP	A90F
RMIR	CTRP	A90RA
5.368447D-01	7.680980D-02	8.423885D-01
5.367477D-01	8.431267D-02	1.322395D+00

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP

9.740978D+00	-1.459810D+02	-8.415856D+00	-8.562734D+00
1.069249D+01	3.756515D+01	-7.415856D+00	-2.080744D+05

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

V	RC	GM	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
8.270000D+01	-2.108000D+03	2.430000D+04	2.378000D-03	-2.077651D+03
4.400000D+01	1.696304D+01	1.376610D+01	2.450384D+00	1.093954D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	6.239495D+00	0.0	-5.332010D-02	-1.798255D+03
7.050000D+02	0.0	-1.771492D-01	-1.456841D+01	1.166963D+04
THEOF	AICF	BIIF	BICF	DFW
THEOR	AICR	BITR	BICR	LFFW
9.926538D+00	2.088313D-01	-8.000000D-01	-8.000000D-01	1.202620D+03
1.095871D+01	1.465792D-01	-8.000000D-01	-8.000000D-01	1.119065D+03
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.044262D+01	-2.748175D+00	5.548291D-03	7.770720D-02	2.668699D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.111673D+04	6.391519D+02	5.342093D+01	1.829354D+03	7.090299D+02
1.178291D+04	7.596509D+02	5.204378D+01	2.064140D+03	7.527685D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
-2.482956D+03	1.421248D+03	7.380244D+01	-1.040832D+02	-1.248117D+02
-4.486557D+02	8.238047D+02	6.595811D+03	2.334883D+02	-2.255275D+01
XR	L/DE	SHPTOT	WFF	NMLB
-4.864441D+03	5.194601D+00	-4.736446D+01	-4.636446D+01	-1.726345D+00
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CP5R	AMTR	LAMDAR
5.841923D-02	7.857963D-02	-6.903237D-04	7.541274D-01	1.262755D-02
5.841923D-02	8.417056D-02	-1.247375D-04	7.534763D-01	3.309844D-03
MUF	VF	DFFR	DFP	AOF
MUR	VR	DFRF		AOR
1.964427D-01	9.239489D+00	1.294130D+00	8.391298D-01	3.797265D+00
1.951333D-01	9.875076D+00	6.824968D-38		4.188876D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
2.971572D+00	1.151297D+00	6.826273D-01	6.624473D+00	5.240653D+00
3.353366D+00	1.222329D+00	6.592127D-01	7.379275D+00	6.070346D+00
CAPVF	ALPHAF	BETAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARN	ATIPR	BPTPR
1.396753D+02	7.463039D+00	3.600000D+02	1.043461D+01	3.186805D+00
1.381096D+02	5.071415D+00	3.600000D+02	1.331640D+01	3.569194D+00

CASE 11

PAGE 4

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTF	CTFP	A90F	
RMTR	CTRP	A90RA	
5.059349D-01	7.755733D-02	4.656530E-01	
5.061365D-01	8.273343D-02	7.481998E-01	

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
1.877223D+01	-1.060395D+02	-8.567160D+00	-1.092880D+01
2.002507D+01	-2.527678D+00	-7.567160D+00	-2.655699D+05

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STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
7.552682D+02	1.773500D+04	1.157010D+05	1.067690D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-2.715073D-02	3.561211D-02	8.113234D-02	2.349915D-01
1.348019D-04	2.223555D+00	-7.092675D-03	1.801238D-02
3.870433D-02	-5.488226D-02	-4.480186D-02	5.171715D+00
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
-3.671525D-02	2.115908D+00	4.901640D-01	-6.364216D+00
-6.756849D-03	-1.393255D+00	1.050259D-02	-9.028577D-01
-5.934927D-01	-3.231276D-01	6.844095D-02	-7.930315D+01
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-5.672445D-03	3.958039D-01	4.478109D-01	1.320014D-01
-1.250964D-03	-1.349201D+00	-6.725853D-03	-1.671552D-01
1.472945D-02	-2.007617D-01	-1.728860D-03	1.968165D+00
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
8.022980D-04	-2.328416D+00	5.401849D-02	1.078441D-02
-1.004545D-01	-6.744943D-02	8.070688D-01	-1.342284D+01
6.788566D-04	-2.533087D-01	-4.512400D-02	9.070957D-02
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
-1.274336D-03	-1.067004D+00	4.289152D-02	1.472230D-02
-5.624165D-03	-4.182018D-02	3.899016D-01	-7.515071D-01
2.378243D-03	-8.949586D-02	-1.453693D-01	3.177834D-01
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
1.017185D-03	-5.706355D-02	-1.390302D-02	-8.379950D-03
-3.052773D-03	-4.372447D-02	1.140653D-02	-4.079148D-01
-1.150937D-03	-3.206776D-02	1.538929D-01	-1.537895D-01

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	-0.712D-05	-0.502D-02	0.102D-03	0.136D-01	-0.143D-02	0.517D-01
CTR	0.128D-04	0.906D-02	0.679D-04	0.908D-02	0.198D-02	0.376D-01
CHF	0.759D-06	0.535D-03	0.799D-05	0.107D-02	-0.483D-03	0.528D-02
CHR	0.284D-05	0.200D-02	0.609D-05	0.813D-03	-0.216D-03	0.460D-02
AIF	0.230D-03	0.162D+00	0.665D-03	0.889D-01	-0.810D-01	0.585D+00
AIR	0.378D-03	0.266D+00	0.436D-03	0.583D-01	-0.617D-01	0.497D+00
VFR	-0.790D-01	-0.557D+02	0.190D+00	0.254D+02	-0.277D+01	0.104D+03
VRR	-0.452D-01	-0.319D+02	0.128D+00	0.171D+02	0.402D+01	0.763D+02
LF			0.378D+02	0.505D+04		
DF			-0.225D+01	-0.300D+03		
MF			0.227D+03	0.303D+05		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.158D-05	-0.211D-03	-0.363D-03	-0.724D-04	0.466D-02
CYR	0.184D-05	0.245D-03	0.365D-03	0.685D-05	0.499D-02
BIF	0.866D-04	0.116D-01	-0.669D-01	-0.122D-01	0.102D+01
BIR	-0.890D-04	-0.119D-01	0.676D-01	0.360D-03	0.102D+01
YF	-0.676D+02	-0.904D+04			
LF	-0.481D+01	-0.643D+03			
NF	-0.346D+03	-0.462D+05			
CTF					-0.434D-03
CTR					-0.117D-03

FORCE = 0.241446D+07

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X	BICF	BICR	OMEGAF	OMEGAR
Z	0.110D+02	0.140D+02	0.0	0.0
M	0.344D+02	0.454D+02	0.0	0.0
Y	-0.728D+01	0.347D+01	0.0	0.0
L	-0.428D+00	0.312D+00	0.0	0.0
N	-0.951D+00	0.627D+00	0.0	0.0
	0.706D+00	-0.571D+00	0.0	0.0
CTF	-0.139D-01	-0.518D-05	0.0	0.0
CTR	0.377D-02	-0.138D-01	0.0	0.0
CHF	-0.566D-02	-0.106D-05	0.0	0.0
CHR	0.326D-03	-0.610D-02	0.0	0.0
AIF	-0.110D+01	0.275D-03	0.0	0.0
AIR	0.221D-01	-0.110D+01	0.0	0.0
VFR	-0.281D+02	0.284D-01	0.0	0.0
VRR	0.759D+01	-0.279D+02	0.0	0.0
QF	0.187D+02	-0.846D-02	0.0	0.0
QR	-0.480D+01	0.172D+02	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELR	QFALPHA
	0.496D-02	-0.210D+00	-0.173D+00	-0.339D+00
	0.817D-03	0.494D+01	-0.908D-02	0.109D+00
	-0.139D+00	-0.120D+00	-0.126D-01	-0.186D+02
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELR	QRALPHA
	-0.216D-01	0.107D+01	0.259D+00	0.275D+00
	-0.464D-02	0.710D+00	0.342D-02	-0.620D+00
	-0.878D-01	0.639D-01	-0.199D-01	-0.117D+02

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V	RC	GW	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
1.028000D+02	-2.390000D+03	2.430000D+04	2.378000D-03	-1.536188D+03
4.400000D+01	1.613284D+01	1.411165D+01	2.961337D+00	1.078609D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	6.239495D+00	0.0	-7.930136D-02	-1.487848D+03
7.050000D+02	0.0	-2.792169D-01	-1.326318D+01	1.115693D+04
THEOF	AICF	B1TF	B1CF	DFW
THEOR	AICR	B1TR	B1CR	LEFW
1.007699D+01	-1.280312D-01	1.600000D+00	1.600000D+00	1.862071D+03
1.046946D+01	-1.701133D-01	1.600000D+00	1.600000D+00	1.829388D+03
THEIAC	DELIAB	DELTAS	DELTAR	DELTAC
1.027322D+01	-2.638869D+00	1.401646D-02	-7.193644D-02	2.537383D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.089133D+04	2.800416D+02	9.298523D+00	6.545299D+02	6.589616D+02
1.125115D+04	3.202292D+02	5.052133D+00	7.628294D+02	6.599286D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
-2.117255D+03	2.274752D+03	1.146319D+02	-1.612954D+02	-1.064289D+02
-1.522699D+03	1.280420D+03	1.063657D+04	3.081326D+02	-7.654208D+01
XR	L/DE	SHPTOT	WFF	NMLB
-3.638185D+03	7.199252D+00	-8.297096D+01	-8.197096D+01	-1.220651D+00
SIGOF	CISF	CP5F	AMTF	LANDAF
SIGOR	CISR	CP5R	AMTR	LANDAR
5.841923D-02	7.720259D-02	-5.886497D-04	7.841242D-01	1.812976D-02
5.841923D-02	7.970247D-02	-4.233482D-04	7.830992D-01	1.468661D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
2.446254D-01	7.273099D+00	1.326109D+00	8.513968D-01	3.689847D+00
2.431518D-01	7.559155D+00	1.881177D-37		3.855735D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B18OR	A27OR
1.062792D+00	1.069988D+00	2.386888D+00	4.530497D+00	6.016795D+00
1.238668D+00	1.071559D+00	2.366904D+00	4.862913D+00	6.379010D+00
CAPVF	ALPHAF	BETAFW	ATIPF	BTIPF
CAPVR	ALPHAR	BETARW	ATIPR	BTIPR
1.736230D+02	6.632843D+00	1.876164D-17	7.695634D+00	1.508112D+00
1.725544D+02	5.965633D+00	1.887535D-17	1.037151D+01	1.637845D+00

CASE 8

PAGE 4

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMTF	CTFP	A90F
RMTR	CTRP	A90RA
4.745994D-01	7.646944D-02	9.161160D-02
4.753478D-01	7.909858D-02	1.930058D-01

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPIOT	NMLB
DELHPR	RHPR	WFF	RP

3.551022D+01	-7.091865D+01	-1.072961D+01	-1.056568D+01
3.673112D+01	-3.981096D+01	-9.729613D+00	-2.567461D+05

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

V	RC	GM	RHO	XF LW
FE	ALPHA	ALFF	THEIA	LF LW
1.235000D+02	-2.934000D+03	2.430000D+04	2.378000D-03	-1.300251D+03
4.400000D+01	1.608675D+01	1.474436D+01	2.599121D+00	1.027721D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	6.239495D+00	0.0	-1.153914D-01	-1.234324D+03
7.050000D+02	0.0	-4.068891D-01	-1.355849D+01	1.061365D+04
THEOF	AICF	B1TF	BICF	DFW
THEOR	AICR	B1TR	BICR	LFFW
9.737579D+00	1-1.998798D-01	2.800000D+00	2.800000D+00	2.722173D+03
1.018764D+01	-3.074455D-01	4.000000D+00	4.000000D+00	2.799472D+03
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
9.962612D+00	-3.028220D+00	4.378512D-02	-1.049367D-01	2.296598D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.035852D+04	1.127966D+02	1.349155D+01	7.286044D+01	7.647944D+02
1.068494D+04	-7.198216D+01	4.737252D+00	-5.411405D+02	7.344388D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
-2.497984D+03	3.444147D+03	1.645148D+02	-2.305087D+02	-1.255671D+02
-1.837859D+03	1.839869D+03	1.629781D+04	2.981749D+02	-9.238437D+01
XR	L/DE	SHPTOT	WFF	NMLB
-2.916640D+03	9.325986D+00	-1.179515D+02	-1.169515D+02	-1.026564D+00
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	7.316450D-02	-6.945018D-04	8.155390D-01	2.578309D-02
5.841923D-02	7.550636D-02	-5.109707D-04	8.146433D-01	2.751230D-02
MUF	VF	DFFR	DF	A0F
MUR	VR	DFRF		A0R
2.939111D-01	5.749045D+00	1.318677D+00	8.627515D-01	3.402243D+00
2.921510D-01	5.964300D+00	1.879905D-39		3.565096D+00
A1F	B1F	BETA0F	B180F	A270F
A1R	B1R	BETA0R	B180R	A270R
1.183003D-01	1.241859D+00	2.922139D+00	3.193526D+00	6.252157D+00
-8.786598D-01	1.192561D+00	4.061620D+00	2.341410D+00	6.637482D+00
CAPVF	ALPHA	BETAFW	AT1PF	BPTPF
CAPVR	ALPHAR	BETARW	AT1PR	BPTPR
2.085841D+02	6.586745D+00	3.126648D-18	6.705045D+00	1.247481D+00
2.075219D+02	7.019451D+00	3.145485D-18	8.208085D+00	1.481299D+00

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMIF	CTFP	A90F	
RMIR	CTRP	A90RA	
4.432874D-01	7.286169D-02	3.596154D+02	
4.440031D-01	7.524688D-02	3.597035D+02	

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
5.521595D+01	-7.035116D+01	-5.712035D+00	-2.620948D+01
5.702350D+01	-3.536087D+01	-4.712035D+00	-6.368904D+05

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

V	RC	GM	RHO	XF	LW
FE	ALPHA	ALFF	THETA	LF	LW
6.120000D+01	1.533000D+03	2.430000D+04	2.378000D-03	3.612608D+03	
4.400000D+01	-1.318534D+01	-2.070489D+01	1.070564D+00	1.188990D+04	
VTF	CGF	BETAF	PSI	XR	LW
VTR	CGL	PHI	GAMMA	LR	LW
7.050000D+02	6.239495D+00	0.0	7.770991D-02	4.449865D+03	
7.050000D+02	0.0	-3.442162D-01	1.416924D+01	1.233353D+04	
THEOF	AICF	B1TF	BICF	DFW	
THEOR	AICR	B1TR	BICR	LFFW	
1.734519D+01	6.588544D-01	-2.500000D+00	-2.500000D+00	7.920094D+02	
1.839540D+01	2.133223D-01	-2.500000D+00	-2.500000D+00	-1.061868D+03	
THETAC	DELTAB	DELTAS	DELTAR	DELTAC	
1.787029D+01	-2.183264D+00	1.437603D-01	1.537755D-01	8.426583D+00	
TF	HF	YF	MHF	LHF	
TR	HR	YR	MHR	LHR	
1.236317D+04	1.254110D+03	2.007331D+02	3.514207D+03	8.758694D+02	
1.303855D+04	1.383324D+03	1.200337D+02	3.733250D+03	6.633808D+02	
QF	LZ	YFY	LF	RHPF	
QR	DFX	MF	NF	RHPR	
2.424626D+04	-1.214533D+03	7.115906D+01	3.252171D+02	1.218796D+03	
2.891121D+04	5.289159D+02	-6.187624D+03	-6.331191D+02	1.453291D+03	
XR	L/DE	SHPTOT	WFF	NMLB	
6.811710D+03	3.117188D+00	2.772087D+03	2.773087D+03	2.160763D-02	
SIGOF	CTSF	CPSF	AMTF	LAMDAF	
SIGOR	CTSR	CPSR	AMTR	LAMDAR	
5.841923D-02	8.736000D-02	6.741065D-03	7.237020D-01	-7.549638D-02	
5.841923D-02	9.174014D-02	8.038037D-03	7.263335D-01	-8.597623D-02	
MUF	VF	DFFR	DFF	A0F	
MUR	VR	DFRF		A0R	
1.365980D-01	1.295139D+01	8.913114D-01	1.123210D+00	4.970633D+00	
1.389586D-01	1.304955D+01	1.157213D-03		5.285728D+00	
A1F	B1F	BETA0F	B180F	A270F	
A1R	B1R	BETA0R	B180R	A270R	
5.715333D+00	1.422256D+00	-8.376689D-01	1.057731D+01	7.951878D+00	
6.072874D+00	1.077165D+00	-9.070656D-01	1.123410D+01	8.700784D+00	
CAPVF	ALPHA	BETAFW	AT1PF	BPTPF	
CAPVR	ALPHAR	BETARW	AT1PR	BPTPR	
1.043823D+02	-2.269302D+01	1.110928D-16	3.430300D+02	5.889639D+00	
1.089001D+02	-2.589528D+01	1.092056D-16	3.458875D+02	6.167664D+00	

CASE 10

PAGE 4

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMTF	CTFP	A90F
RMTR	CTRP	A90RA
5.407038D-01	8.429505D-02	2.715400D+00
5.391680D-01	8.744024D-02	2.947997D+00

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	NFF	RP
9.830266D+00	1.228626D+03	2.792114D+03	2.212584D-02
1.019705D+01	1.463488D+03	2.793114D+03	5.376579D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

V	RC	GM	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
8.120000D+01	1.412000D+03	2.430000D+04	2.378000D-03	2.942505D+03
4.400000D+01	-9.211861D+00	-1.359513D+01	7.288720D-01	1.222219D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	6.239495D+00	0.0	6.567510D-02	3.380625D+03
7.050000D+02	0.0	-4.198791D-01	9.880766D+00	1.254479D+04
THEOF	AICF	B1TF	B1CF	DFW
THEOR	AICR	B1TR	B1CR	LEFW
1.758411D+01	3.027865D-01	-8.000000D-01	-8.000000D-01	1.127711D+03
1.839770D+01	-5.300588D-02	-8.000000D-01	-8.000000D-01	-1.059128D+03
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.799091D+01	-2.577146D+00	1.128276D-01	2.942696D-02	8.520082D+00
YF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.252015D+04	1.134014D+03	1.530359D+02	3.129235D+03	8.684260D+02
1.293154D+04	1.255208D+03	9.025526D+01	3.364837D+03	7.244490D+02
QR	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
2.456694D+04	-1.225999D+03	1.219453D+02	5.159861D+02	1.234916D+03
2.809369D+04	9.436160D+02	-7.579625D+03	-4.614663D+02	1.412196D+03
XR	L/DE	SHPTOT	MFF	NMLB
5.347564D+03	4.286036D+00	2.747112D+03	2.748112D+03	2.910928D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LANDAR
5.841923D-02	8.847291D-02	6.830222D-03	7.523675D-01	-7.696380D-02
5.841923D-02	9.225903D-02	7.810746D-03	7.548626D-01	-8.493054D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
1.842456D-01	1.026233D+01	1.099008D+00	1.048455D+00	4.997141D+00
1.867923D-01	1.030813D+01	1.595563D-36		5.257380D+00
A1F	B1F	BETAOF	B180F	A270F
A1R	B1R	BETAOR	B180R	A270R
5.087480D+00	1.410167D+00	-3.023146D-01	9.877323D+00	9.159461D+00
5.471646D+00	1.176338D+00	-4.809008D-01	1.049636D+01	9.853648D+00
CAPVF	ALPHAF	BETAFFW	AT1FF	BPTFF
CAPVR	ALPHAR	BETAARN	AT1PR	BPIPR
1.371419D+02	-1.871186D+01	8.854228D-17	3.463756D+02	5.279301D+00
1.407081D+02	-2.062612D+01	8.733508D-17	3.492598D+02	5.596667D+00

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CASE 12

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMTR	CTFP	A90F
5.103632D-01	CTRP	A90RA
5.086880D-01	8.665087D-02	2.107184D+00
	8.893796D-02	2.235503D+00

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
2.019324D+01	1.255109D+03	2.788031D+03	2.911405D-02
2.072623D+01	1.432922D+03	2.789031D+03	7.074714D+02

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
7.552682D+02	1.773500D+04	1.157010D+05	1.067690D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-3.837197D-02	1.268133D-01	7.514428D-02	9.656338D-02
-1.169278D-03	8.118316D-01	-6.605309D-03	-1.583875D-01
1.707931D-02	-1.306982D-01	-3.657128D-02	2.313521D+00
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
-3.290183D-02	-1.519625D+00	3.779180D-01	-6.627487D+00
-1.719330D-03	-1.132677D+00	6.628650D-03	-2.328963D-01
-6.468944D-01	-4.919245D-01	7.288463D-02	-8.762674D+01
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-3.600490D-03	9.702351D-03	4.373208D-01	1.111793D-01
-6.409080D-04	-1.218557D+00	-7.422492D-03	-8.681584D-02
8.407015D-03	-3.939320D-01	2.114327D-03	1.138794D+00
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
2.562979D-03	-1.000662D+00	3.884329D-02	2.438196D-02
-1.090613D-01	-3.274998D-02	9.257494D-01	-1.477318D+01
3.098395D-03	-1.340272D-01	-3.409336D-02	4.197011D-01
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
3.068624D-04	-6.529810D-01	-3.305480D-02	-7.198333D-03
-1.971309D-02	1.276929D-01	4.334857D-01	-2.670288D+00
7.876854D-04	9.788131D-03	-1.598255D-01	1.066979D-01
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
7.959405D-05	-1.156734D-02	6.768283D-02	5.506597D-04
6.715512D-04	-2.287971D-01	1.337565D-02	9.096669D-02
3.317612D-04	-9.572305D-02	1.756918D-01	4.493957D-02

AD-A134 323

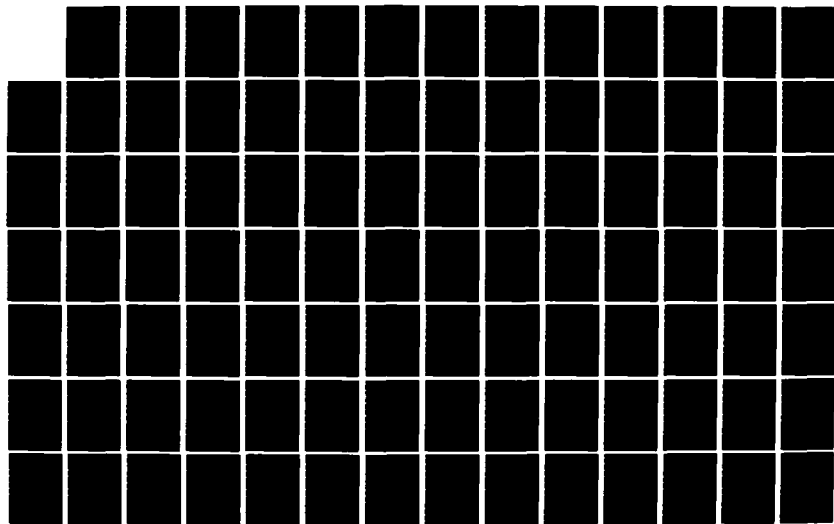
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VOLUME 4(U) BOEING VERTOL CO PHILADELPHIA PA 83 OCT 83
NADC-81118-68-VOL-4

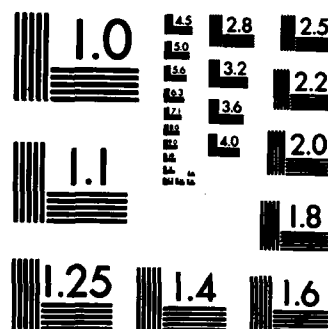
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UNCLASSIFIED

F/G 1/2

NL





MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	-0.193D-05	-0.136D-02	0.987D-04	0.134D-01	-0.142D-02	0.518D-01
CTR	0.120D-04	0.845D-02	0.851D-04	0.115D-01	0.183D-02	0.416D-01
CHF	0.269D-05	0.190D-02	0.112D-04	0.152D-02	-0.323D-03	0.667D-02
CHR	0.445D-05	0.314D-02	0.963D-05	0.130D-02	0.529D-04	0.583D-02
AIF	0.532D-03	0.375D+00	0.638D-03	0.864D-01	0.834D-01	0.567D+00
AIR	0.649D-03	0.458D+00	0.555D-03	0.752D-01	-0.675D-01	0.520D+00
VFR	-0.729D-01	-0.514D+02	0.206D+00	0.279D+02	-0.310D+01	0.998D+02
VRR	-0.409D-01	-0.288D+02	0.176D+00	0.238D+02	0.390D+01	0.748D+02
LF			0.424D+02	0.574D+04		
DF			0.166D+01	0.225D+03		
NF			0.177D+03	0.240D+05		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.306D-05	-0.414D-03	-0.145D-03	-0.733D-04	0.539D-02
CYR	0.337D-05	0.457D-03	0.168D-03	-0.314D-04	0.564D-02
B1F	0.956D-04	0.129D-01	-0.708D-01	-0.161D-01	0.104D+01
B1R	-0.104D-03	-0.141D-01	0.781D-01	-0.467D-02	0.104D+01
YF	-0.668D+02	-0.905D+04			
LF	-0.176D+03	-0.238D+05			
NF	0.801D+02	0.108D+05			
CTF					-0.298D-03
CTR					-0.282D-03

FORCE = 0.241446D+07

X	BICF	BICR	OMEGAF	OMEGAR
Z	0.144D+02	0.172D+02	0.0	0.0
M	0.360D+02	0.445D+02	0.0	0.0
Y	-0.686D+01	0.317D+01	0.0	0.0
L	-0.105D+00	-0.204D+00	0.0	0.0
N	0.398D-02	-0.153D+00	0.0	0.0
	-0.164D+00	0.239D+00	0.0	0.0
CTF	-0.132D-01	0.746D-06	0.0	0.0
CTR	0.266D-02	-0.135D-01	0.0	0.0
CHF	-0.677D-02	-0.965D-07	0.0	0.0
CHR	0.290D-03	-0.709D-02	0.0	0.0
AIF	-0.111D+01	-0.388D-04	0.0	0.0
AIR	0.148D-01	-0.112D+01	0.0	0.0
VFR	-0.254D+02	0.538D-02	0.0	0.0
VRR	0.581D+01	-0.251D+02	0.0	0.0
QF	-0.397D+01	0.179D-02	0.0	0.0
QR	0.109D+01	-0.659D+01	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELR	QFALPHA
	-0.848D-02	0.980D-01	0.925D+00	0.198D+01
	-0.430D-03	0.309D+01	-0.279D-01	-0.582D-01
	0.184D-01	-0.764D+00	-0.281D-01	0.249D+01
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELR	QRALPHA
	-0.213D-02	0.346D+00	-0.118D+01	0.218D+01
	0.731D-03	0.389D+01	0.144D-01	0.990D-01
	0.358D-01	0.101D+01	-0.243D-01	0.485D+01

CASE 11

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V	RC	GW	RH0	XF LW
FE	ALPHA	ALFF	THETA	LF LW
1.007000D+02	1.146000D+03	2.430000D+04	2.378000D-03	2.469772D+03
4.400000D+01	-5.579804D+00	-8.347479D+00	8.936604D-01	1.243693D+04
VTF	CGF	DEIAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	6.239495D+00	0.0	5.035095D-02	2.632005D+03
7.050000D+02	0.0	-5.231510D-01	6.448065D+00	1.237467D+04
THEOF	AICF	B1TF	B1CF	DFW
THEOR	AICR	B1TR	B1CR	LFEM
1.790381D+01	-1.933439D-01	1.600000D+00	1.600000D+00	1.592352D+03
1.831623D+01	-3.842933D-01	1.600000D+00	1.600000D+00	-8.058100D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.811002D+01	-2.654469D+00	5.498854D-02	-1.455307D-01	8.612418D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.265128D+04	8.509189D+02	7.047663D+01	2.328978D+03	7.747830D+02
1.261962D+04	8.973038D+02	3.598643D+01	2.475734D+03	7.155009D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
2.516835D+04	-9.568195D+02	1.909945D+02	7.541429D+02	1.265177D+03
2.696151D+04	1.506456D+03	-7.660954D+03	1.114892D+02	1.355285D+03
XR	L/DE	SHPTOT	NFF	NMLB
4.342553D+03	5.454551D+00	2.720462D+03	2.721462D+03	3.676810D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	8.939800D-02	6.997596D-03	7.805535D-01	-7.475594D-02
5.841923D-02	9.022262D-02	7.495972D-03	7.826314D-01	-7.962576D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
2.329356D-01	8.454998D+00	1.276080D+00	9.905327D-01	4.998470D+00
2.354515D-01	8.304228D+00	1.141843D-36		5.056407D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
3.784206D+00	1.258081D+00	8.418317D-01	8.446357D+00	1.046215D+01
4.023043D+00	1.161806D+00	6.204552D-01	8.723467D+00	1.078926D+01
CAPVF	ALPHAF	DETAOF	ATIPF	BPIPF
CAPVR	ALPHAR	DETAOR	ATIPR	BPIPR
1.700763D+02	-1.507980D+01	8.363634D-17	3.487044D+02	3.987855D+00
1.727474D+02	-1.607458D+01	8.274262D-17	3.514432D+02	4.187442D+00

CASE 11

PAGE 4

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTF	CTFP	A90F	
RMTF	CTRP	A90RA	
4.796475D-01	8.817326D-02	1.558259D+00	
4.781014D-01	8.773193D-02	1.562412D+00	

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
3.886162D+01	1.304039D+03	2.797991D+03	3.597726D-02
3.866711D+01	1.393952D+03	2.798991D+03	8.742473D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

V	RC	GM	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
1.202000D+02	6.740000D+02	2.430000D+04	2.378000D-03	1.961770D+03
4.400000D+01	-3.084047D+00	-4.960852D+00	1.278115D-01	1.249492D+04
VIF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	6.239495D+00	0.0	3.151093D-02	2.198072D+03
7.050000D+02	0.0	-5.941402D-01	3.172009D+00	1.216674D+04
THEOF	AICF	BITF	BICF	DFW
THEOR	AICR	BITR	BICR	LEFW
1.797950D+01	-3.883708D-01	2.800000D+00	2.800000D+00	2.197320D+03
1.843532D+01	-4.667647D-01	4.000000D+00	4.000000D+00	-4.931580D+02
THEIAC	DELTAB	DELTAS	DELTAR	DELTAC
1.820741D+01	-3.032724D+00	1.965974D-02	-1.729691D-01	8.687912D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.262218D+04	8.076449D+02	4.203632D+01	2.225541D+03	9.083502D+02
1.235112D+04	5.574260D+02	3.651832D+01	1.568430D+03	8.812390D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
2.469344D+04	-6.106613D+02	2.504181D+02	9.475980D+02	1.241275D+03
2.649850D+04	2.167605D+03	-7.409577D+03	6.021806D+02	1.332010D+03
XR	L/DE	SHPTOT	WFF	NMLB
3.575545D+03	6.626729D+00	2.673285D+03	2.674285D+03	4.487773D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	8.943363D-02	6.865393D-03	8.103203D-01	-7.283818D-02
5.841923D-02	8.747768D-02	7.367244D-03	8.108988D-01	-7.432006D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
2.810408D-01	7.120637D+00	1.398164D+00	9.523833D-01	4.941703D+00
2.835099D-01	6.894120D+00	5.629419D-11		4.856800D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
3.615910D+00	1.475010D+00	7.771619D-01	8.081790D+00	1.166928D+01
2.547429D+00	1.430977D+00	1.745018D+00	6.918011D+00	1.172213D+01
CAPVF	ALPHAF	BETAFW	ATIPF	BPIPF
CAPVR	ALPHAR	BETARW	ATIPR	BPIPR
2.030106D+02	-1.258405D+01	3.182461D-18	3.510319D+02	3.905184D+00
2.049883D+02	-1.282483D+01	3.154745D-18	3.524634D+02	2.921829D+00

PAGE 4

CASE 12

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTF	CTFP	A90F	
RMTR	CTRP	A90RA	
4.48933D-01	8.858446D-02	9.964194D-01	
4.478409D-01	8.625772D-02	1.018473D+00	

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
6.292056D+01	1.304195D+03	2.797474D+03	4.295199D-02
6.126790D+01	1.393278D+03	2.798474D+03	1.043733D+03

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

CATALOG OF TRIM & STABILITY DERIVATIVE DATA

A-97 TRIM ANALYSIS (CH-46E)

GW = 24,300 lb CG = 6 in. fwd

<u>ALTITUDE</u>	<u>AIRSPEED</u>	<u>CLIMB RATE</u>	<u>SIDESLIP</u>	<u>DERIVATIVES</u>
0 ft	50 kt	0 ft/min	-45 deg	
			-30	X
			-15	
			0	
			15	
			30	X
	90		45	
			-30	
			-20	X
			-10	
			0	
			10	
	130		20	X
			30	
			-10	X
			- 7	
			- 4	
			0	
			4	
			7	
			10	X

V	RC	GM	RH0	XF LW
FE	ALPHA	ALFF	THETA	LF LW
5.000000D+01	0.0	2.430000D+04	2.378000D-03	1.795537D+03
4.400000D+01	-3.096109D+00	-1.773031D+01	3.485442D+00	1.318607D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	6.239495D+00	-4.500000D+01	4.493809D+01	2.897439D+03
	0.0	-6.545933D+00	0.0	1.308427D+04
THEOF	AICF	BIIF	BICF	DFW
THEOR	AICR	BITR	BICR	LFFW
1.599333D+01	-1.144164D+00	-2.500000D+00	-2.500000D+00	3.807249D+02
1.712000D+01	2.724951D+00	-2.500000D+00	-2.500000D+00	-2.527796D+03
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.655669D+01	-1.147600D+00	-1.275141D+00	4.117922D-01	7.408285D+00
IF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.327171D+04	9.787351D+02	1.861874D+02	2.324160D+03	7.417278D+02
1.335406D+04	1.123545D+03	2.177658D+02	3.163006D+03	8.468202D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.888161D+04	-2.544670D+03	2.797642D+03	1.556272D+03	9.491292D+02
2.364900D+04	2.436404D+02	-8.868727D+03	-1.808424D+03	1.188773D+03
XR	L/DE	SHPTOT	WFF	NMLB
3.173895D+03	2.131303D+00	2.237902D+03	2.238902D+03	2.233237D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	9.440893D-02	5.249558D-03	7.037152D-01	-4.913459D-02
5.841923D-02	9.501522D-02	6.575011D-03	7.085778D-01	-6.025398D-02
MUF	VF	DFFR	DFF	AOF
MUR	VR	DFRF		AOR
1.183482D-01	1.694327D+01	9.217083D-01	9.512831D-01	5.220693D+00
1.188578D-01	1.638058D+01	2.842542D-01		5.365413D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAIR	B180R	A270R
3.500879D+00	-1.858863D+00	1.607776D+00	8.632020D+00	7.266495D+00
2.631333D+00	4.627370D+00	2.696740D+00	7.915718D+00	7.963121D+00
CAPVF	ALPHAF	BETAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
8.529058D+01	-1.197193D+01	3.143440D+02	3.509048D+02	3.963777D+00
8.776309D+01	-1.729559D+01	3.145948D+02	3.525352D+02	5.323201D+00

CASE 13

PAGE 4

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMTF	CTFP	A90F
RMTR	CTRP	A90RA
5.549208D-01	9.348441D-02	2.904644D+00
5.461610D-01	9.276273D-02	3.093309D+00

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
5.109162D+00	9.542383D+02	2.248081D+03	2.223130D-02
5.069721D+00	1.193843D+03	2.249081D+03	5.402206D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

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V	RC	GM	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
5.000000D+01	0.0	2.430000D+04	2.378000D-03	1.033874D+03
4.400000D+01	5.601609D-01	-1.123341D+01	2.736074D+00	1.227250D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	6.239495D+00	-3.000000D+01	2.989551D+01	2.954973D+03
7.050000D+02	0.0	-3.681043D+00	0.0	1.243559D+04
THEOF	AICF	BIIF	BICF	DFW
THEOR	AICR	BITR	BICR	LEFW
1.484798D+01	-6.566523D-01	-2.500000D+00	-2.500000D+00	3.121890D+02
1.680149D+01	2.578808D+00	-2.500000D+00	-2.500000D+00	-8.219616D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.582474D+01	-2.185844D+00	-1.056125D+00	4.739513D-01	6.840882D+00
IF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.227897D+04	9.539165D+02	1.394002D+02	2.550860D+03	7.109581D+02
1.227311D+04	1.137809D+03	3.232962D+02	3.272316D+03	1.197452D+03
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.460045D+04	-8.188702D+02	1.749985D+03	2.830417D+03	7.339263D+02
2.223561D+04	3.202100D+02	-3.849095D+03	1.988829D+02	1.117726D+03
XR	L/DE	SHPTOT	WFF	NMLB
1.263082D+03	2.122650D+00	1.951652D+03	1.952652D+03	2.560620D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	8.675400D-02	4.059288D-03	7.058570D-01	-4.195448D-02
5.841923D-02	8.994217D-02	6.182053D-03	7.099874D-01	-6.182781D-02
MUF	VF	DFFR	DFP	AOF
MUR	VR	DFRF	DFP	AOR
1.186933D-01	1.593576D+01	1.247303D+00	9.694680D-01	4.682154D+00
1.192166D-01	1.550327D+01	1.467000D-01		5.072517D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
4.161446D+00	-1.094921D+00	4.514314D-01	8.768021D+00	6.416161D+00
3.623749D+00	4.354359D+00	1.381299D+00	8.616386D+00	7.584472D+00
CAPVF	ALPHAF	BETAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
8.478307D+01	-9.257621D+00	3.296970D+02	-4.778393D+00	4.303078D+00
8.861414D+01	-1.847393D+01	3.298439D+02	-2.816090D+00	5.664980D+00

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CASE 13

TP
0.0

MFF
NFF
0.0
0.0

ZFF
YFF
0.0
0.0

XFF
LFF
0.0
0.0

RMTR 5.548346D-01 8.700754D-02 2.413141D+00
5.469226D-01 8.816381D-02 2.893551D+00

A90F
A90RA

CTFP
CTRP

NON UNIFORM DOWNWASH POWER CORRECTIONS

NMLB
RP

SHPTOT
WFF

RHPF
RHPR

DELHPF
DELHPR

4.755185D+00 7.386814D+02 1.961226D+03 2.548127D-02
4.818378D+00 1.122544D+03 1.962226D+03 6.191948D+02

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STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
7.552682D+02	1.773500D+04	1.157010D+05	1.067690D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-2.864717D-02	2.339195D-01	9.340583D-02	1.886098D-01
-5.516868D-03	1.238082D+00	3.032567D-02	-4.040581D-01
2.379059D-02	-1.304653D-01	-1.047888D-02	1.742434D+00
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
-9.416729D-02	-4.238154D+00	4.436131D-01	-5.582429D+00
1.137349D-02	-1.142075D+00	-5.578718D-01	8.329996D-01
-5.743746D-01	-4.524909D-01	1.825580D-01	-4.206747D+01
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
9.298338D-04	-3.294874D-01	4.112504D-01	1.036123D-01
8.579800D-03	-1.239583D+00	1.514905D-02	6.283887D-01
3.235068D-03	-3.111117D-01	1.333275D-01	2.369380D-01
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
1.409534D-02	-1.505270D+00	7.856629D-02	1.086696D-01
-9.482184D-02	-1.662943D-01	8.997859D-01	-6.944798D+00
-6.952111D-03	-2.023175D-01	-1.022511D-02	-5.091760D-01
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
3.386639D-03	-8.561829D-01	-6.051972D-03	3.615447D-02
-8.457708D-03	6.260229D-02	4.233621D-01	-6.194466D-01
2.070333D-04	-4.708077D-02	-1.434888D-01	1.516322D-02
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
1.004775D-03	3.089482D-03	4.711299D-02	-6.783518D-03
-4.289763D-04	-1.934018D-01	1.289437D-02	-3.141843D-02
1.904155D-03	-5.993747D-02	1.682222D-01	1.394612D-01

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	0.980D-05	0.691D-02	0.865D-04	0.633D-02	-0.141D-02	0.447D-01
CTR	0.121D-04	0.850D-02	0.831D-04	0.609D-02	0.183D-02	0.339D-01
CHF	0.335D-05	0.236D-02	0.811D-05	0.594D-03	-0.381D-03	0.468D-02
CHR	0.417D-05	0.294D-02	0.865D-05	0.634D-03	-0.217D-04	0.436D-02
AIF	0.629D-03	0.443D+00	0.396D-03	0.290D-01	-0.872D-01	0.336D+00
AIR	0.887D-03	0.625D+00	0.398D-03	0.291D-01	-0.405D-01	0.306D+00
VFR	-0.113D+00	-0.797D+02	0.287D+00	0.210D+02	-0.512D+01	0.131D+03
VRR	-0.886D-01	-0.625D+02	0.278D+00	0.203D+02	0.638D+01	0.824D+02
LF			0.229D+02	0.168D+04		
DF			0.898D+00	0.657D+02		
MF			0.756D+02	0.554D+04		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.252D-05	-0.184D-03	-0.237D-03	-0.726D-04	0.529D-02
CYR	0.264D-05	0.193D-03	0.239D-03	-0.885D-05	0.536D-02
BIF	0.260D-03	0.191D-01	-0.798D-01	-0.155D-01	0.885D+00
BIR	-0.301D-03	-0.221D-01	0.505D-01	-0.149D-02	0.897D+00
YF	-0.592D+02	-0.433D+04			
LF	-0.851D+01	-0.624D+03			
NF	-0.375D+02	-0.275D+04			
CTF					0.381D-02
CTR					-0.518D-02

FORCE = 0.241446D+07

X	BICF	BICR	OMEGAF	OMEGAR
Z	0.149D+02	0.169D+02	0.0	0.0
M	0.177D+02	0.228D+02	0.0	0.0
Y	-0.424D+01	0.106D+01	0.0	0.0
L	-0.351D+00	-0.421D-01	0.0	0.0
N	-0.199D+00	-0.785D-03	0.0	0.0
	0.808D-01	0.209D-01	0.0	0.0
CTF	-0.667D-02	0.229D-03	0.0	0.0
CTR	0.189D-02	-0.679D-02	0.0	0.0
CHF	-0.582D-02	0.205D-04	0.0	0.0
CHR	0.190D-03	-0.614D-02	0.0	0.0
AIF	-0.904D+00	0.872D-03	0.0	0.0
AIR	0.679D-02	-0.925D+00	0.0	0.0
VFR	-0.197D+02	0.811D+00	0.0	0.0
VRR	0.668D+01	-0.187D+02	0.0	0.0
QF	0.238D+01	-0.853D-01	0.0	0.0
QR	0.606D-01	-0.130D+00	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELR	QFALPHA
	-0.806D-02	0.488D+00	0.558D+00	0.116D+01
	0.267D-02	0.337D+01	-0.518D-01	0.196D+00
	-0.315D-01	-0.313D+00	-0.771D-01	-0.231D+01
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELR	QRALPHA
	-0.527D-02	-0.173D+00	-0.831D+00	0.165D+01
	0.245D-02	0.313D+01	0.776D-02	0.179D+00
	0.598D-02	0.570D+00	-0.182D-01	0.438D+00

V	RC	GM	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
5.000000D+01	0.0	2.430000D+04	2.378000D-03	6.432165D+02
4.400000D+01	1.825898D+00	-8.936507D+00	2.338003D+00	1.193784D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	6.239495D+00	-1.500000D+01	1.492516D+01	3.174685D+03
7.050000D+02	0.0	-1.910494D+00	0.0	1.216117D+04
THEOF	AICF	B1TF	BICF	DFW
THEOR	AICR	B1TR	B1CR	LFFW
1.434259D+01	5.967332D-01	-2.500000D+00	-2.500000D+00	3.544425D+02
1.682076D+01	2.326924D+00	-2.500000D+00	-2.500000D+00	-2.214202D+02
THEIAC	DELTA B	DELTA S	DELIAR	DELIAC
1.558168D+01	-2.831117D+00	-5.756956D-01	6.572902D-01	6.652462D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.191449D+04	9.851519D+02	2.750748D+02	2.760340D+03	1.141313D+03
1.251413D+04	1.170145D+03	4.143487D+02	3.323826D+03	1.510686D+03
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.276321D+04	-2.100144D+02	9.675732D+02	2.511925D+03	6.415731D+02
2.233612D+04	3.613176D+02	-2.537318D+03	-1.699328D+03	1.122778D+03
XR	L/DE	SHPTOT	WFF	NMLB
5.778901D+02	2.101248D+00	1.864351D+03	1.865351D+03	2.680460D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	8.463554D-02	3.548490D-03	7.080932D-01	-3.844396D-02
5.841923D-02	8.870253D-02	6.209997D-03	7.114059D-01	-6.473996D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
1.187823D-01	1.561350D+01	1.487004D+00	1.005344D+00	4.560717D+00
1.193276D-01	1.506202D+01	3.950589D-02		5.013005D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
4.814581D+00	6.188430D-01	-3.656230D-01	9.283313D+00	6.145091D+00
4.582186D+00	3.772937D+00	3.140493D-01	9.495966D+00	7.503593D+00
CAPVF	ALPHA F	BETA F W	ATIPF	BPIPF
CAPVR	ALPHA R	BETA R W	ATIPR	BPIPR
8.452572D+01	-7.810902D+00	3.448780D+02	-2.859521D+00	4.854190D+00
8.950940D+01	-1.997256D+01	3.449487D+02	-5.919165D-01	5.935611D+00

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTR	CTFP	A90F	
5.538054D-01	CTRP	A90RA	
5.480135D-01	8.463490D-02	2.262208D+00	
	8.621829D-02	2.858749D+00	

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
4.625514D+00	6.461986D+02	1.873689D+03	2.667109D-02
4.712050D+00	1.127490D+03	1.874689D+03	6.481075D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

CASE 15

PAGE 3

V	RC	GM	RHO	XF	LM
FE	ALPHA	ALFF	THETA	LF	LM
5.000000D+01	0.0	2.430000D+04	2.378000D-03	5.422084D+02	
4.400000D+01	2.088518D+00	-8.734697D+00	2.154364D+00	1.194042D+04	
VTF	CGF	BETAF	PSI	XR	LM
VTR	CGL	PHI	GAMMA	LR	LM
7.050000D+02	6.239495D+00	0.0	-6.653765D-03	3.302641D+03	
7.050000D+02	0.0	-1.866571D-01	0.0	1.218997D+04	
THEOF	AICF	B1TF	BICF	DFW	
THEOR	AICR	B1TR	B1CR	LFFW	
1.425643D+01	1.394956D+00	-2.500000D+00	-2.500000D+00	3.646236D+02	
1.684146D+01	1.143976D+00	-2.500000D+00	-2.500000D+00	-2.673679D+02	
THETAC	DELTAB	DELTAS	DELTAR	DELTAC	
1.554895D+01	-3.008627D+00	8.650290D-02	5.051512D-01	6.627090D+00	
TF	HF	YF	MHF	LHF	
TR	HR	YR	MHR	LHR	
1.191060D+04	1.002568D+03	3.179772D+02	2.904405D+03	1.247332D+03	
1.257206D+04	1.202592D+03	2.848747D+02	3.229324D+03	1.001316D+03	
QF	LFZ	YFY	LF	RHPF	
QR	DFX	MF	WF	RHPR	
1.246706D+04	-2.539021D+02	4.773760D+01	1.893768D+02	6.266862D+02	
2.253419D+04	3.741252D+02	-1.977238D+03	1.624222D+01	1.132735D+03	
XR	L/DE	SHPTOT	WFF	NMLB	
4.204089D+02	2.078713D+00	1.859421D+03	1.860421D+03	2.687564D-02	
SIGOF	CISF	CPSF	AMTF	LAMDAF	
SIGOR	CISR	CPSR	AMTR	LAMDAR	
5.841923D-02	8.422047D-02	3.466152D-03	7.088144D-01	-3.762162D-02	
5.841923D-02	8.869527D-02	6.265067D-03	7.111185D-01	-6.627926D-02	
MUF	VF	DFFR	DFP	AOF	
MUR	VR	DFRF		AOR	
1.187822D-01	1.562809D+01	1.563469D+00	1.045697D+00	4.536928D+00	
1.193432D-01	1.505664D+01	2.712641D-41		5.170958D+00	
AIF	BIF	BETAOF	B180F	A270F	
AIR	BIR	BETAOR	B180R	A270R	
4.721092D+00	2.025658D+00	-2.402630D-01	9.190053D+00	6.153231D+00	
5.250654D+00	1.626009D+00	-3.628282D-01	1.030376D+01	7.519730D+00	
CAPVF	ALPHAF	BETAFW	ATIPF	BPTPF	
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR	
8.444700D+01	-7.411482D+00	3.600000D+02	-2.690390D+00	5.137314D+00	
8.989793D+01	-2.062333D+01	3.600000D+02	3.391720D-01	5.496660D+00	

PAGE 4

CASE 15

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMIF	CTFP	A90F
RMIR	CTRP	A90RA
5.522741D-01	8.465322D-02	2.239836D+00
5.510579D-01	8.642247D-02	3.094453D+00

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
4.626515D+00	6.313128D+02	1.868771D+03	2.674124D-02
4.723209D+00	1.137458D+03	1.869771D+03	6.498122D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

CASE 16

PAGE 3

V	RC	GW	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
5.000000D+01	0.0	2.430000D+04	2.378000D-03	5.795621D+02
4.400000D+01	2.012954D+00	-8.753654D+00	2.429856D+00	1.196199D+04
VTF	CGF	BEIAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	6.239495D+00	1.500000D+01	-1.493358D+01	3.215621D+03
7.050000D+02	0.0	1.475974D+00	0.0	1.215168D+04
THEOF	AICF	BIIF	BICF	DFW
THEOR	AICR	BITR	BICR	LEFW
1.444484D+01	2.005945D+00	-2.500000D+00	-2.500000D+00	3.380722D+02
1.670693D+01	-4.207597D-01	-2.500000D+00	-2.500000D+00	-2.415942D+02
THEIAC	DELTAB	DELTAS	DELTAR	DELTAC
1.557589D+01	-2.662035D+00	8.091741D-01	2.850573D-01	6.647973D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.193301D+04	1.014154D+03	3.325879D+02	3.013166D+03	1.317725D+03
1.252004D+04	1.118976D+03	9.845823D+01	3.023275D+03	5.726086D+02
QF	LFZ	YFY	LF	RHFE
QR	DFX	MF	NF	RHPR
1.300844D+04	-2.295702D+02	-8.528824D+02	-2.231732D+03	6.539004D+02
2.197066D+04	3.463497D+02	-2.496592D+03	1.553979D+03	1.104407D+03
XR	L/DE	SHPIOT	WFF	NMLB
5.230221D+02	2.098434D+00	1.858308D+03	1.859308D+03	2.689173D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	8.511558D-02	3.616671D-03	7.087705D-01	-3.810328D-02
5.841923D-02	8.888093D-02	6.108391D-03	7.094125D-01	-6.466590D-02
MUF	VF	DFFR	DFF	AOF
MUR	VR	DERF		AOR
1.188304D-01	1.563576D+01	1.497779D+00	1.004137D+00	4.576013D+00
1.193599D-01	1.507345D+01	3.952526D-02		4.976974D+00
AIF	BIF	BEIAOF	B180F	A270F
AIR	BIR	BEIAOR	B180R	A270R
4.170866D+00	3.343202D+00	3.847907D-01	8.685309D+00	6.316424D+00
4.987654D+00	-3.779252D-01	-6.175054D-02	9.883347D+00	7.323160D+00
CAPVF	ALPHAF	BEIAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BEIARW	ATIPR	BPTPR
8.452407D+01	-7.631566D+00	1.511419D+01	-3.316180D+00	5.345384D+00
8.950909D+01	-1.992929D+01	1.504555D+01	6.078219D-04	5.001952D+00

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTF	CTFP	A90F	
RMTB	CTRP	A90RA	
5.501111D-01	8.480617D-02	2.250450D+00	
5.534614D-01	8.615099D-02	2.870985D+00	

3

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
4.634874D+00	6.585352D+02	1.867651D+03	2.675727D-02
4.708372D+00	1.109116D+03	1.868651D+03	6.502016D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

V	RC	GN	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
5.000000D+01	0.0	2.430000D+04	2.378000D-03	8.723052D+02
4.400000D+01	9.656640D-01	-1.073444D+01	2.941944D+00	1.224322D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	6.239495D+00	3.000000D+01	-2.988229D+01	2.965136D+03
7.050000D+02	0.0	3.352014D+00	0.0	1.229698D+04
THEOF	AICF	BITF	BICF	DFW
THEOR	AICR	BITR	BICR	LFFW
1.499749D+01	2.527521D+00	-2.500000D+00	-2.500000D+00	2.288496D+02
1.659644D+01	-1.389544D+00	-2.500000D+00	-2.500000D+00	-6.503062D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.579697D+01	-1.908413D+00	1.305279D+00	1.434802D-01	6.819356D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.223077D+04	1.032208D+03	3.182625D+02	3.064966D+03	1.201961D+03
1.260626D+04	1.043979D+03	1.435343D+01	2.728788D+03	2.559226D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.500731D+04	-6.463570D+02	-1.712885D+03	-2.860159D+03	7.543782D+02
2.154085D+04	2.397769D+02	-5.048691D+03	7.106084D+02	1.082802D+03
XR	L/DE	SHPTOT	WFF	NMLB
1.081326D+03	2.106549D+00	1.937180D+03	1.938180D+03	2.579740D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	8.737772D-02	4.172406D-03	7.081572D-01	-4.117671D-02
5.841923D-02	8.915790D-02	5.988892D-03	7.060299D-01	-6.123140D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF	AOR	AOR
1.187895D-01	1.591359D+01	1.263636D+00	9.652128D-01	4.774466D+00
1.192855D-01	1.536512D+01	1.470413D-01		4.991623D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
3.319196D+00	4.197689D+00	1.374234D+00	8.018278D+00	6.705888D+00
4.044250D+00	-1.867156D+00	8.578153D-01	8.948157D+00	7.235004D+00
CAPVF	ALPHAF	BETAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
8.476708D+01	-8.899335D+00	3.027347D+01	-5.215140D+00	5.351416D+00
8.857131D+01	-1.829089D+01	3.013451D+01	-1.990086D+00	4.454462D+00

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PAGE 4

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTF	CTFP	A90F	
RMTR	CTRP	A90RA	
5.481016D-01	8.679994D-02	2.437771D+00	
5.544601D-01	8.718111D-02	2.898962D+00	

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
4.743839D+00	7.591220D+02	1.946689D+03	2.567146D-02
4.764671D+00	1.087567D+03	1.947689D+03	6.238164D+02

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
7.552682D+02	1.773500D+04	1.157010D+05	1.067690D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-2.460928D-02	1.559094D-01	5.023740D-02	2.002887D-01
8.483264D-04	1.340377D+00	-3.551326D-02	6.212901D-02
2.038639D-02	-7.409837D-02	-5.332326D-02	1.493041D+00
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
-1.004101D-01	-3.638819D+00	4.653311D-01	-5.579474D+00
-6.454795D-03	-9.669794D-01	5.494127D-01	-4.727308D-01
-5.681753D-01	-4.584515D-01	-1.352938D-01	-4.161154D+01
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
7.757986D-04	-3.439434D-01	4.161407D-01	9.875593D-02
-1.021422D-02	-1.114380D+00	-2.099741D-02	-7.480602D-01
4.054485D-03	-3.473883D-01	-1.307838D-01	2.969389D-01
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
-1.626931D-02	-1.521054D+00	5.622525D-02	-7.015784D-02
-8.362267D-02	-2.670702D-02	8.915690D-01	-6.124287D+00
1.679163D-02	-1.796384D-01	-3.471675D-02	1.229772D+00
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
-3.156699D-03	-8.553507D-01	-8.963554D-03	-4.603486D-02
-7.095573D-03	1.163189D-01	4.193103D-01	-5.196596D-01
5.797384D-03	-2.357258D-02	-1.582495D-01	4.245839D-01
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
-3.613818D-04	-2.214012D-04	4.128369D-02	5.666208D-03
-8.239754D-04	-1.947705D-01	1.359983D-02	-6.034561D-02
-2.980060D-03	-7.742819D-02	1.708172D-01	-2.182511D-01

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	0.977D-05	0.689D-02	0.860D-04	0.630D-02-0	0.125D-02	0.445D-01
CTR	0.119D-04	0.839D-02	0.825D-04	0.604D-02	0.162D-02	0.339D-01
CHF	0.342D-05	0.241D-02	0.868D-05	0.536D-03-0	0.370D-03	0.512D-02
CHR	0.399D-05	0.281D-02	0.788D-05	0.577D-03-0	0.628D-04	0.390D-02
..IF	0.795D-03	0.561D+00	0.435D-03	0.318D-01-0	0.493D-01	0.339D+00
AIR	0.780D-03	0.550D+00	0.371D-03	0.272D-01-0	0.799D-01	0.303D+00
VFR	-0.113D+00-0	0.797D+02	0.286D+00	0.209D+02-0	0.452D+01	0.131D+03
VRR	-0.886D-01-0	0.625D+02	0.275D+00	0.202D+02	0.574D+01	0.829D+02
LF			0.207D+02	0.151D+04		
DF			0.361D+01	0.265D+03		
MF			0.165D+03	0.121D+05		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.259D-05-0	0.190D-03-0	0.239D-03-0	0.841D-04	0.517D-02
CYR	0.305D-05	0.223D-03	0.229D-03-0	0.287D-04	0.542D-02
B1F	0.252D-03	0.184D-01-0	0.436D-01-0	0.112D-01	0.892D+00
B1R	-0.112D-03-0	0.822D-02	0.887D-01-0	0.314D-02	0.894D+00
YF	-0.495D+02-0	0.363D+04			
LF	0.301D+02	0.221D+04			
NF	-0.913D+02-0	0.669D+04			
CTF					-0.408D-02
CTR					0.503D-02

FORCE = 0.241446D+07

X	BICF	BICR	OMEGAF	OMEGAR
Z	1.152D+02	0.165D+02	0.0	0.0
M	0.173D+02	0.235D+02	0.0	0.0
Y	-0.420D+01	0.117D+01	0.0	0.0
L	0.385D-01	0.622D-01	0.0	0.0
N	-0.615D-01	0.356D-01	0.0	0.0
	0.474D-01	-0.825D-02	0.0	0.0
CTF	-0.651D-02	0.236D-03	0.0	0.0
CTR	0.189D-02	-0.700D-02	0.0	0.0
CHF	-0.586D-02	0.204D-04	0.0	0.0
CHR	0.175D-03	-0.605D-02	0.0	0.0
AIF	-0.917D+00	0.408D-03	0.0	0.0
AIR	0.656D-02	-0.914D+00	0.0	0.0
VFR	-0.193D+02	0.978D+00	0.0	0.0
VRR	0.665D+01	-0.193D+02	0.0	0.0
QF	0.251D+01	-0.744D-01	0.0	0.0
QR	0.416D-01	-0.295D+00	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELR	QFALPHA
	-0.811D-02	0.243D+00	0.569D+00	0.118D+01
	-0.203D-02	0.334D+01	0.306D-01	-0.148D+00
	-0.306D-01	-0.402D+00	0.455D-01	-0.224D+01
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELR	QRALPHA
	-0.534D-02	-0.189D+00	-0.809D+00	0.162D+01
	-0.210D-02	0.307D+01	0.129D-01	-0.154D+00
	0.516D-02	0.696D+00	-0.198D-01	0.378D+00

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V	RC	GM	RHO	XF	LW
FE	ALPHA	ALFF	THEIA	LF	LW
5.000000D+01	0.0	2.430000D+04	2.378000D-03	1.573428D+03	
4.400000D+01	-2.468127D+00	-1.688200D+01	3.769145D+00	1.310926D+04	
VTF	CGF	BETAF	PSI	XR	LW
VTR	CGL	PHI	GAMMA	LR	LW
7.050000D+02	6.239495D+00	4.500000D+01	-4.490376D+01	2.885723D+03	
7.050000D+02	0.0	6.207152D+00	0.0	1.280153D+04	
THEOF	AICF	B1TF	BICF	DFW	
THEOR	AICR	B1TR	B1CR	LFFW	
1.602843D+01	2.260232D+00	-2.500000D+00	-2.500000D+00	2.244051D+02	
1.688935D+01	-2.511075D+00	-2.500000D+00	-2.500000D+00	-2.151247D+03	
THETAC	DELTAB	DELTAS	DELTAR	DELTAC	
1.645889D+01	-9.396852D-01	1.577914D+00	-1.671265D-01	7.332475D+00	
TF	HF	YF	MHF	LHF	
TR	HR	YR	MHR	LHR	
1.315975D+04	1.072125D+03	1.242340D+02	3.061725D+03	5.485582D+02	
1.308619D+04	9.788174D+02	-1.145807D+02	2.380855D+03	-1.403591D+02	
QF	LFZ	YFY	LF	RHPF	
QR	DFX	MF	NF	RHPR	
1.883144D+04	-2.158916D+03	-2.854847D+03	-2.340732D+03	9.496234D+02	
2.282382D+04	1.315565D+02	-1.115618D+04	3.583471D+03	1.147293D+03	
XR	L/DE	SHPTOT	WFF	NMLB	
2.867265D+03	2.123909D+00	2.196917D+03	2.197917D+03	2.274881D-02	
SIGOF	CTSF	CPSF	AMTF	LAMDAF	
SIGOR	CTSR	CPSR	AMTR	LAMDAR	
5.841923D-02	9.403408D-02	5.252292D-03	7.078142D-01	-4.799832D-02	
5.841923D-02	9.287125D-02	6.345590D-03	7.022013D-01	-5.917098D-02	
MUF	VF	DFFR	DF	AOF	
MUR	VR	DFRF		AOR	
1.184871D-01	1.683685D+01	9.375154D-01	9.437359D-01	5.219367D+00	
1.189691D-01	1.609750D+01	2.858871D-01		5.211794D+00	
AIF	BIF	BETAOF	B180F	A270F	
AIR	BIR	BETAOR	B180R	A270R	
2.845935D+00	4.179588D+00	2.284166D+00	7.981500D+00	7.477465D+00	
2.555811D+00	-2.913079D+00	2.540883D+00	7.676564D+00	7.498355D+00	
CAPVF	ALPHAF	BETAFW	ATIPF	BPTPF	
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR	
8.524522D+01	-1.150174D+01	4.560295D+01	3.508778D+02	5.056511D+00	
8.769663D+01	-1.698092D+01	4.536635D+01	3.530877D+02	3.875332D+00	

CASE 17

PAGE 4

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMIF	CTFP	A90F
RMTR	CTRP	A90RA
5.474326D-01	9.293988D-02	2.823920D+00
5.551454D-01	9.075816D-02	3.086604D+00

3

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	NFF	RP
5.079402D+00	9.547028D+02	2.206956D+03	2.264537D-02
4.960166D+00	1.152254D+03	2.207956D+03	5.502826D+02

STABILITY NOT CALCULATED FOR THIS CASE. SKIPPING TO NEXT CASE

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CASE 18

V	RC	GW	RHO	XF	LW
FE	ALPHA	ALFF	THETA	LF	LW
9.000000D+01	0.0	2.430000D+04	2.378000D-03	2.042148D+03	
4.400000D+01	-6.020024D+00	-9.714123D+00	7.076356D-01	1.290260D+04	
VTF	CGF	BETAF	PSI	XR	LW
VTR	CGL	PHI	GAMMA	LR	LW
7.050000D+02	6.239495D+00	-3.000000D+01	3.040145D+01	2.153009D+03	
7.050000D+02	0.0	-1.154210D+01	0.0	1.306484D+04	
THEOF	AICF	BITF	BICF	DFW	
THEOR	AICR	BITR	BICR	LEFW	
1.733622D+01	-4.265660D+00	-1.000000D+00	-1.000000D+00	1.286920D+03	
1.774660D+01	3.689707D+00	-1.000000D+00	-1.000000D+00	-2.330884D+03	
THEIAC	DELTA	DELTA	DELTA	DELTA	
1.754141D+01	-2.230337D+00	-2.657485D+00	2.007948D-02	8.171636D+00	
TF	HF	YF	MHF	LHF	
TR	HR	YR	MHR	LHR	
1.301499D+04	1.121348D+03	-3.502167D+02	2.686358D+03	-5.071845D+02	
1.317512D+04	1.319771D+03	3.712374D+02	3.797895D+03	1.534662D+03	
QF	LFZ	YFY	LF	RHPF	
QR	DFX	MF	NF	RHPR	
2.328724D+04	-2.452997D+03	5.580846D+03	8.908728D+03	1.170589D+03	
2.494692D+04	1.035369D+03	-1.177777D+04	2.217573D+03	1.254016D+03	
XR	L/DE	SHPTOT	WFF	NMLB	
4.084430D+03	4.811522D+00	2.524605D+03	2.525605D+03	3.563503D-02	
SIGOF	CTSF	CPSF	AMTF	LAMDAF	
SIGOR	CTSR	CPSR	AMTR	LAMDAR	
5.841923D-02	9.218550D-02	6.474434D-03	7.599069D-01	-6.571791D-02	
5.841923D-02	9.384822D-02	6.935865D-03	7.687881D-01	-7.067161D-02	
MUF	VF	DFFR	DF	AOF	
MUR	VR	DFRF		AOR	
2.097243D-01	9.690458D+00	1.079885D+00	8.905807D-01	5.148788D+00	
2.114542D-01	9.660340D+00	1.415431D-01		5.300019D+00	
AIF	BIF	BETAOF	B180F	A270F	
AIR	BIR	BETAOR	B180R	A270R	
3.328980D+00	-2.942368D+00	1.517475D+00	8.207374D+00	9.696312D+00	
4.057392D+00	5.284264D+00	9.488404D-01	9.072304D+00	1.041766D+01	
CAPVF	ALPHA	BETA	ATIPF	BPTPF	
CAPVR	ALPHAR	BETAR	ATIPR	BPTPR	
1.523279D+02	-1.391818D+01	3.292095D+02	3.478090D+02	4.442931D+00	
1.543906D+02	-1.507822D+01	3.294884D+02	3.510374D+02	6.662273D+00	

CASE 18

PAGE 4

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMTF	CTFP	A90F
RMTR	CTRP	A90RA
4.978091D-01	9.147472D-02	1.856135D+00
4.861439D-01	9.262497D-02	1.816339D+00

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELMPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	MFF	RP
2.930317D+01	1.199892D+03	2.583580D+03	3.482191D-02
2.967164D+01	1.283688D+03	2.584580D+03	8.461724D+02

STABILITY NOT CALCULATED FOR THIS CASE. SKIPPING TO NEXT CASE

CASE 15

PAGE 3

V	RC	GN	RHO	XF LW
FE	ALPHA	ALFF	THEIA	LF LW
9.000000D+01	0.0	2.430000D+04	2.378000D-03	1.377976D+03
4.400000D+01	-1.679984D+00	-4.892692D+00	9.921472D-01	1.210123D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	6.239495D+00	-2.000000D+01	2.003565D+01	1.704148D+03
7.050000D+02	0.0	-7.365766D+00	0.0	1.223551D+04
THEOF	AICF	BITF	BICF	DFW
THEOR	AICR	BITR	BICR	LFFW
1.591112D+01	-2.830026D+00	-2.000000D-01	-2.000000D-01	1.182606D+03
1.659941D+01	2.844495D+00	-2.000000D-01	-2.000000D-01	-3.416585D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.625527D+01	-2.604295D+00	-1.897525D+00	1.163658D-01	7.174626D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.214621D+04	8.989261D+02	-2.136824D+02	2.296099D+03	-1.319600D+02
1.230997D+04	1.037483D+03	3.720696D+02	3.104548D+03	1.656947D+03
QF	LFZ	YFZ	LF	RHPF
QR	DFX	MF	NF	RHPR
1.742822D+04	-3.761822D+02	3.705912D+03	7.508351D+03	8.760711D+02
1.973299D+04	1.172082D+03	-7.102329D+03	4.143240D+02	9.919259D+02
XR	L/DE	SHPTOT	WFF	NMLB
2.305348D+03	5.046227D+00	1.967997D+03	1.968997D+03	4.570855D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	8.664491D-02	4.845480D-03	7.633845D-01	-5.305666D-02
5.841923D-02	8.743069D-02	5.486264D-03	7.691357D-01	-6.113978D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF	DFR	AOR
2.120001D-01	9.085634D+00	1.373655D+00	8.853230D-01	4.716824D+00
2.134300D-01	9.065304D+00	6.869487D-02		4.786154D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
3.423418D+00	-1.498097D+00	1.012368D+00	7.889558D+00	8.745470D+00
3.807120D+00	4.268905D+00	7.403850D-01	8.332710D+00	9.379512D+00
CAPVF	ALPHAF	BETAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
1.521193D+02	-1.072900D+01	3.396526D+02	3.522434D+02	3.736855D+00
1.542701D+02	-1.274658D+01	3.397949D+02	3.551271D+02	5.719940D+00

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTF	CTFP	A90F	
RMTB	CIRP	A90RA	
4.958204D-01	8.579329D-02	1.495091D+00	
4.878794D-01	8.674531D-02	1.465082D+00	

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
2.748317D+01	9.035543D+02	2.023268D+03	4.446051D-02
2.778814D+01	1.019714D+03	2.024268D+03	1.080390D+03

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STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
7.552682D+02	1.773500D+04	1.157010D+05	1.067690D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-3.958418D-02	1.789963D-01	9.673220D-02	1.723038D-01
-8.242798D-04	1.110181D+00	3.864300D-02	1.177419D-01
2.031429D-02	-1.593866D-01	-2.767816D-03	2.901737D+00
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
-2.398595D-02	-2.291610D+00	4.521375D-01	-6.732321D+00
-2.812763D-02	-1.472836D+00	-7.870662D-01	-4.017811D+00
-6.378487D-01	-4.892483D-01	2.574058D-01	-9.111168D+01
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-3.026000D-03	1.922045D-02	4.560125D-01	1.307312D-01
3.025702D-03	-1.389345D+00	1.805366D-02	4.321979D-01
9.834713D-03	-3.064405D-01	1.802965D-01	1.404812D+00
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
3.053334D-02	-1.331381D+00	4.727613D-02	2.521696D-02
-1.105933D-01	-1.236841D-01	8.746353D-01	-1.579738D+01
-3.998851D-02	-1.633419D-01	1.345217D-03	-5.713473D+00
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
3.628028D-03	-7.554692D-01	-5.771326D-03	1.595075D-02
-9.402956D-03	3.017575D-02	4.150568D-01	-1.343139D+00
-1.159749D-02	-3.369414D-02	-1.315554D-01	-1.656610D+00
MU	MP	MDELB	MDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
-4.644975D-04	-1.733303D-02	4.031289D-02	-8.315498D-03
-3.688935D-03	-1.613561D-01	1.328251D-02	-5.269355D-01
3.921270D-03	-5.724137D-02	1.621270D-01	5.601227D-01

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	-0.501D-05	-0.353D-02	0.102D-03	0.146D-01	-0.159D-02	0.535D-01
CTR	0.723D-05	0.510D-02	0.855D-04	0.122D-01	0.211D-02	0.404D-01
CHF	0.206D-05	0.146D-02	0.101D-04	0.144D-02	-0.374D-03	0.611D-02
CHR	0.345D-05	0.244D-02	0.929D-05	0.133D-02	0.172D-04	0.554D-02
ALF	0.522D-03	0.368D+00	0.752D-03	0.107D+00	-0.935D-01	0.652D+00
ALR	0.630D-03	0.444D+00	0.635D-03	0.907D-01	-0.443D-01	0.574D+00
VFR	-0.637D-01	-0.449D+02	0.188D+00	0.268D+02	-0.303D+01	0.954D+02
VRR	-0.392D-01	-0.276D+02	0.156D+00	0.223D+02	0.394D+01	0.689D+02
LF			0.261D+02	0.372D+04		
DF			0.441D+01	0.630D+03		
MF			0.245D+03	0.350D+05		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.263D-05	-0.375D-03	-0.203D-03	-0.525D-04	0.516D-02
CYR	0.270D-05	0.386D-03	0.219D-03	-0.597D-06	0.514D-02
BIF	-0.145D-03	-0.207D-01	-0.767D-01	-0.161D-01	0.979D+00
BIR	0.109D-04	0.156D-02	0.585D-01	-0.116D-02	0.953D+00
YF	-0.707D+02	-0.101D+05			
LF	-0.230D+02	-0.329D+04			
NF	-0.379D+03	-0.541D+05			
CTF					0.515D-02
CTR					-0.707D-02

FORCE = 0.241446D+07

X	BICF	BICR	OMEGAF	OMEGAR
Z	0.130D+02	0.155D+02	0.0	0.0
M	0.379D+02	0.482D+02	0.0	0.0
Y	-0.757D+01	0.362D+01	0.0	0.0
L	0.197D+00	0.301D+00	0.0	0.0
N	-0.262D+00	0.218D+00	0.0	0.0
	0.219D+00	-0.108D-01	0.0	0.0
CTF	-0.147D-01	0.349D-05	0.0	0.0
CTR	0.352D-02	-0.145D-01	0.0	0.0
CHF	-0.654D-02	0.435D-08	0.0	0.0
CHR	0.372D-03	-0.669D-02	0.0	0.0
AIF	-0.106D+01	-0.889D-04	0.0	0.0
AIR	0.232D-01	-0.107D+01	0.0	0.0
VFR	-0.261D+02	-0.315D-03	0.0	0.0
VRR	0.669D+01	-0.254D+02	0.0	0.0
QF	0.203D+01	0.443D-02	0.0	0.0
QR	-0.270D+00	-0.499D+00	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELR	QFALPHA
	-0.629D-02	-0.453D+00	0.621D+00	0.136D+01
	0.240D-02	0.353D+01	-0.547D-01	0.343D+00
	-0.235D-01	-0.636D+00	-0.811D-01	-0.336D+01
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELR	QRALPHA
	-0.899D-02	-0.196D+00	-0.764D+00	0.157D+01
	0.353D-02	0.311D+01	0.657D-03	0.504D+00
	-0.536D-02	0.507D+00	-0.284D-02	-0.766D+00

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V	RC	GM	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
9.00000D+01	0.0	2.43000D+04	2.37800D-03	1.064096D+03
4.40000D+01	5.592088D-01	-2.566179D+00	1.239529D+00	1.199295D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.05000D+02	6.239495D+00	-1.00000D+01	9.943074D+00	1.550584D+03
7.05000D+02	0.0	-3.710933D+00	0.0	1.221227D+04
THEOF	AICF	B1TF	BICF	DFW
THEOR	AICR	B1TR	BICR	LFFW
1.522102D+01	-1.311788D+00	3.00000D-01	3.00000D-01	1.219223D+03
1.621693D+01	1.533662D+00	3.00000D-01	3.00000D-01	-4.485914D+01
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.571897D+01	-2.923250D+00	-9.678912D-01	9.815741D-02	6.758893D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.201369D+04	7.965970D+02	-5.225034D+01	2.123664D+03	3.622862D+02
1.227439D+04	9.397855D+02	2.541089D+02	2.689290D+03	1.329272D+03
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.472785D+04	-3.295753D+01	1.897040D+03	4.153675D+03	7.403305D+02
1.834333D+04	1.219602D+03	-3.248803D+03	6.606692D+02	9.220713D+02
XR	L/DE	SHPIOT	WFF	NMLB
1.523217D+03	5.006488D+00	1.762402D+03	1.763402D+03	5.103772D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	8.534932D-02	4.094709D-03	7.654986D-01	-4.603007D-02
5.841923D-02	8.772371D-02	5.099903D-03	7.691035D-01	-5.688114D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DERF		AOR
2.130691D-01	9.024988D+00	1.579869D+00	9.039673D-01	4.583657D+00
2.142897D-01	9.050404D+00	1.782483D-02		4.810048D+00
AIF	BIF	BETAOF	B18OF	A27OF
AIR	BIR	BETAOR	B18OR	A27OR
3.499863D+00	-2.714644D-02	7.745716D-01	7.802193D+00	8.315642D+00
3.926333D+00	2.889193D+00	5.202745D-01	8.423770D+00	9.112854D+00
CAPVF	ALPHA	BETAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
1.520294D+02	-8.863977D+00	3.498800D+02	-5.440929D+00	3.499968D+00
1.542322D+02	-1.161438D+01	3.499382D+02	-2.514458D+00	4.874785D+00

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CASE 19

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTF	CTFP	A90F	
RMTR	CIRP	A90RA	
4.941431D-01	8.502567D-02	1.287585D+00	
4.895014D-01	8.658052D-02	1.428714D+00	

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
2.723727D+01	7.675677D+02	1.817374D+03	4.949476D-02
2.773535D+01	9.498066D+02	1.818374D+03	1.202723D+03

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

V	RC	GW	RHO	XF LW
FE	ALPHA	ALFF	THEIA	LF LW
9.000000D+01	0.0	2.430000D+04	2.378000D-03	9.445822D+02
4.400000D+01	1.183132D+00	-2.017714D+00	1.273540D+00	1.200964D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	6.239495D+00	0.0	-5.505665D-03	1.522796D+03
7.050000D+02	0.0	-2.804906D-01	0.0	1.224063D+04
THEOF	AICF	B1TF	B1CF	DFW
THEOR	AICR	B1TR	B1CR	LFFW
1.502392D+01	2.016315D-01	4.000000D-01	4.000000D-01	1.213759D+03
1.607626D+01	4.403150D-02	4.000000D-01	4.000000D-01	-3.845582D+01
THETAC	DELIAB	DELIAS	DELTAR	DELTAC
1.555009D+01	-2.983050D+00	4.580045D-02	3.946002D-02	6.627978D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.201996D+04	8.025157D+02	1.138284D+02	2.227661D+03	8.840871D+02
1.230170D+04	9.055911D+02	9.806206D+01	2.482876D+03	8.562026D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.396071D+04	-1.338584D+01	1.090393D+02	4.520606D+02	7.017683D+02
1.783007D+04	1.214294D+03	-2.537680D+03	3.768367D+02	8.962710D+02
XR	L/DE	SHPTOT	WFF	NMLB
1.290422D+03	5.006579D+00	1.698039D+03	1.699039D+03	5.297111D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	8.522005D-02	3.881425D-03	7.668234D-01	-4.402021D-02
5.841923D-02	8.796793D-02	4.957204D-03	7.684558D-01	-5.574436D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF	DFR	AOR
2.133419D-01	9.047052D+00	1.637684D+00	9.371239D-01	4.562902D+00
2.144992D-01	9.077837D+00	2.718313D-41		4.781675D+00
A1F	B1F	BETA0F	B180F	A270F
A1R	B1R	BETA0R	B180R	A270R
3.619360D+00	1.4335602D+00	6.804583D-01	7.939969D+00	8.382135D+00
4.034667D+00	1.390314D+00	4.637608D-01	8.553537D+00	9.099088D+00
CAPVF	ALPHA	BETAFW	AT1PF	BPTPF
CAPVR	ALPHAR	BETARW	AT1PR	BPTPR
1.520046D+02	-8.316868D+00	3.600090D+02	-4.697509D+00	3.893677D+00
1.542123D+02	-1.130169D+01	3.600000D+02	-1.782201D+00	4.267495D+00

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CASE 20

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMTF	CTFP	A90F
RMTR	CTRP	A90RA
4.925694D-01	8.514393D-02	1.274857D+00
4.915482D-01	8.678161D-02	1.444103D+00

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
2.727515D+01	7.290434D+02	1.753114D+03	5.130795D-02
2.779977D+01	9.240708D+02	1.754114D+03	1.246783D+03

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

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CASE 21

V	RC	GM	TH0	XF LW
FE	ALPHA	ALFF	THETA	LF LW
9.000000D+01	0.0	2.430000D+04	2.378000D-03	9.671229D+02
4.400000D+01	7.795013D-01	-2.337376D+00	1.281640D+00	1.200162D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	6.239495D+00	1.000000D+01	-9.946250D+00	1.564034D+03
7.050000D+02	0.0	2.916720D+00	0.0	1.220685D+04
THEOF	AICF	BIIF	BICF	DFW
THEOR	AICR	BITR	BICR	LFFW
1.521724D+01	1.826649D+00	3.000000D-01	3.000000D-01	1.217850D+03
1.612297D+01	-1.439146D+00	3.000000D-01	3.000000D-01	-3.167041D+01
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.567010D+01	-2.852683D+00	1.091710D+00	1.460122D-02	6.721011D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.201060D+04	8.483109D+02	3.128520D+02	2.476091D+03	1.503769D+03
1.227431D+04	8.913479D+02	-6.800444D+01	2.328072D+03	3.223117D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.451663D+04	-1.509930D+01	-1.615193D+03	-3.602093D+03	7.297127D+02
1.814343D+04	1.218168D+03	-3.228786D+03	-8.233391D+02	9.120228D+02
XR	L/DE	SHPTOT	WFF	NMLB
1.426360D+03	4.983817D+00	1.741736D+03	1.742736D+03	5.164295D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	8.559566D-02	4.035983D-03	7.675329D-01	-4.520572D-02
5.841923D-02	8.741111D-02	5.044326D-03	7.668135D-01	-5.628126D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
2.131924D-01	9.012426D+00	1.598332D+00	9.018537D-01	4.586698D+00
2.143783D-01	9.052974D+00	1.783990D-02		4.799326D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
3.532225D+00	3.110943D+00	7.680092D-01	7.868359D+00	8.578515D+00
3.815998D+00	-1.452886D-01	6.879727D-01	8.353807D+00	9.013780D+00
CAPVF	ALPHAF	BETAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
1.520288D+02	-8.647197D+00	1.011364D+01	-5.188274D+00	4.706865D+00
1.542083D+02	-1.145486D+01	1.005711D+01	-2.404501D+00	3.818762D+00

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CASE 21

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	10.0	0.0	0.0
0.0	0.0	0.0	
RMIF	CTFP	A90F	
RMTR	CTRP	A90RA	
4.903490D-01	8.508709D-02	1.248229D+00	
4.931979D-01	8.654208D-02	1.537813D+00	

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
2.725694D+01	7.569696D+02	1.796715D+03	5.006354D-02
2.772304D+01	9.397458D+02	1.797715D+03	1.216544D+03

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

V	RC	GW	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
9.000000D+01	0.0	2.430000D+04	2.378000D-03	1.242966D+03
4.400000D+01	-1.344163D+00	-4.549825D+00	1.136039D+00	1.211996D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	6.239495D+00	2.000000D+01	-2.001052D+01	1.739614D+03
7.050000D+02	0.0	6.646219D+00	0.0	1.223847D+04
THEOF	AICF	BLTF	BICF	DFW
THEOR	AICR	BLTR	BICR	LFFW
1.580881D+01	2.818593D+00	-2.000000D-01	-2.000000D-01	1.112731D+03
1.653114D+01	-3.135577D+00	-2.000000D-01	-2.000000D-01	-3.281118D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.616998D+01	-2.630932D+00	1.970622D+00	-2.016580D-01	7.108508D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.214498D+04	9.685237D+02	3.580354D+02	2.902265D+03	1.558669D+03
1.232523D+04	9.461548D+02	-2.644667D+02	2.425583D+03	-2.866844D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.683866D+04	-3.541239D+02	-3.437586D+03	-6.491987D+03	8.464353D+02
1.987380D+04	1.104728D+03	-6.572895D+03	8.423144D+02	9.990037D+02
XR	L/DE	SHPTOT	WFF	NMLB
2.186193D+03	5.007200D+00	1.945439D+03	1.946439D+03	4.623828D-02
SIGOF	CTSF	CPSF	AMTF	LANDAF
SIGOR	CTSR	CPSR	AMTR	LANDAR
5.841923D-02	8.613412D-02	4.681567D-03	7.674643D-01	-5.189797D-02
5.841923D-02	8.748253D-02	5.525411D-03	7.644306D-01	-6.016216D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
2.122129D-01	9.088766D+00	1.386199D+00	8.817650D-01	4.698093D+00
2.135951D-01	9.086170D+00	6.879415D-02		4.794338D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
3.544271D+00	4.012824D+00	8.866058D-01	7.990444D+00	8.901771D+00
3.538525D+00	-1.797301D+00	9.755969D-01	8.071623D+00	9.107058D+00
CAPVF	ALPHA	BETAFW	ATPF	BPTPF
CAPVR	ALPHAR	BETARW	ATPR	BPTPR
1.521163D+02	-1.041502D+01	2.032896D+01	3.527001D+02	5.353934D+00
1.542286D+02	-1.247974D+01	2.019166D+01	3.551944D+02	3.968809D+00

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CASE 16

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMIF	CIFP	A90F	
RMIR	CTRP	A90RA	
4.892714D-01	8.592612D-02	1.397557D+00	
4.949311D-01	8.676632D-02	1.569008D+00	

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
2.752572D+01	8.739610D+02	2.000760D+03	4.496044D-02
2.779487D+01	1.026799D+03	2.001760D+03	1.092539D+03

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
7.552682D+02	1.773500D+04	1.157010D+05	1.067690D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-3.958558D-02	4.723555D-02	5.016810D-02	1.754310D-01
1.593877D-03	1.270340D+00	-4.442666D-02	2.276986D-01
1.526469D-02	-6.187509D-02	-5.849927D-02	2.180688D+00
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
-2.016543D-02	-1.183339D+00	4.884823D-01	-6.716721D+00
1.269838D-02	-1.350001D+00	7.798528D-01	1.814070D+00
-6.400966D-01	-5.279939D-01	-1.186304D-01	-9.144312D+01
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-3.099201D-03	1.423174D-02	4.608876D-01	1.249247D-01
-3.480847D-03	-1.214734D+00	-2.924120D-02	-4.972679D-01
9.659681D-03	-3.857668D-01	-1.766141D-01	1.379966D+00
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
-2.199858D-02	-1.326903D+00	2.040350D-02	-9.328725D-03
-1.181390D-01	4.900068D-02	8.732951D-01	-1.687713D+01
4.048017D-02	-1.460267D-01	-1.630454D-02	5.782929D+00
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
-3.037993D-03	-7.566427D-01	-2.041732D-02	-2.422971D-02
-1.034541D-02	1.288691D-01	4.121824D-01	-1.477927D+00
1.161481D-02	-2.950757D-03	-1.503046D-01	1.659272D+00
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
3.331730D-04	-2.205586D-02	4.649726D-02	8.354857D-03
-2.410582D-03	-1.924059D-01	1.318946D-02	-3.443716D-01
-5.064734D-03	-9.000282D-02	1.670629D-01	-7.235394D-01

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CIF	-0.513D-05	-0.362D-02	0.102D-03	0.145D-01	-0.134D-02	0.530D-01
CTR	0.801D-05	0.565D-02	0.860D-04	0.123D-01	0.183D-02	0.406D-01
CHF	0.197D-05	0.139D-02	0.109D-04	0.155D-02	-0.360D-03	0.663D-02
CHR	0.351D-05	0.248D-02	0.859D-05	0.123D-02	-0.398D-04	0.508D-02
AIF	0.515D-03	0.363D+00	0.753D-03	0.108D+00	-0.650D-01	0.652D+00
AIR	0.649D-03	0.457D+00	0.634D-03	0.906D-01	-0.732D-01	0.574D+00
VFR	-0.645D-01	-0.454D+02	0.186D+00	0.266D+02	-0.259D+01	0.947D+02
VRR	-0.389D-01	-0.275D+02	0.157D+00	0.224D+02	0.340D+01	0.693D+02
LF			0.283D+02	0.405D+04		
DF			0.783D+01	0.112D+04		
MF			0.265D+03	0.378D+05		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.263D-05	-0.376D-03	-0.204D-03	-0.891D-04	0.508D-02
CYR	0.269D-05	0.385D-03	0.210D-03	-0.448D-04	0.519D-02
BIF	-0.320D-04	-0.457D-02	-0.519D-01	-0.138D-01	0.953D+00
BIR	0.186D-03	0.265D-01	0.842D-01	-0.231D-02	0.989D+00
YF	-0.764D+02	-0.109D+05			
LF	-0.384D+02	-0.548D+04			
NF	-0.248D+03	-0.354D+05			
CIF					-0.569D-02
CTR					0.652D-02

FORCE = 0.241446D+07

X	BICF	BICR	OMEGAF	OMEGAR
Z	0.133D+02	0.152D+02	0.0	0.0
M	0.371D+02	0.491D+02	0.0	0.0
Y	-0.752D+01	0.374D+01	0.0	0.0
L	-0.117D+00	-0.570D+00	0.0	0.0
N	-0.168D+00	-0.177D+00	0.0	0.0
	-0.602D-01	0.587D-01	0.0	0.0
CTF	-0.144D-01	0.223D-05	0.0	0.0
CTR	0.356D-02	-0.148D-01	0.0	0.0
CHF	-0.657D-02	0.823D-06	0.0	0.0
CHR	0.345D-03	-0.667D-02	0.0	0.0
AIF	-0.106D+01	0.143D-03	0.0	0.0
AIR	0.232D-01	-0.106D+01	0.0	0.0
VFR	-0.257D+02	-0.494D-01	0.0	0.0
VRR	0.678D+01	-0.259D+02	0.0	0.0
QF	0.249D+01	-0.377D-02	0.0	0.0
QR	-0.340D+00	-0.335D+00	0.0	0.0
	QFU	QFP	QFDELB	QFDELYAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELR	QFALPHA
	-0.654D-02	0.132D+00	0.603D+00	0.131D+01
	-0.264D-02	0.357D+01	0.276D-01	-0.377D+00
	-0.271D-01	-0.480D+00	0.419D-01	-0.387D+01
	QRU	QRP	QRDELB	QRDELYAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELR	QRALPHA
	-0.876D-02	0.510D+00	-0.751D+00	0.156D+01
	-0.325D-02	0.310D+01	0.282D-01	-0.464D+00
	-0.709D-02	0.780D+00	-0.606D-01	-0.101D+01

V	RC	GW	RHO	XF LW
FE	ALPHA	ALFF	THEIA	LF LW
9.000000D+01	0.0	2.430000D+04	2.378000D-03	1.691310D+03
4.400000D+01	-4.997702D+00	-8.580226D+00	1.314824D+00	1.278934D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	6.239495D+00	3.000000D+01	-3.025415D+01	2.071208D+03
7.050000D+02	0.0	1.094030D+01	0.0	1.268319D+04
THEOF	AICF	B1TF	BICF	DFW
THEOR	AICR	B1TR	BICR	LEFW
1.701859D+01	4.041770D+00	-1.000000D+00	-1.000000D+00	9.700027D+02
1.738200D+01	-4.287738D+00	-1.000000D+00	-1.000000D+00	-1.784848D+03
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.720030D+01	-2.193590D+00	2.769539D+00	-2.156492D-01	7.907208D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.284142D+04	1.235109D+03	4.636263D+02	3.637626D+03	1.795995D+03
1.280192D+04	1.124318D+03	-3.529037D+02	2.718985D+03	-5.446900D+02
QF	LFZ	YFY	LF	RHFF
QR	DFX	MF	NF	RHPR
2.150238D+04	-1.862565D+03	-5.419590D+03	-8.216561D+03	1.080868D+03
2.341486D+04	8.108265D+02	-1.452765D+04	-7.286361D+02	1.177004D+03
XR	L/DE	SHPTOT	WFF	NMLB
3.580365D+03	4.907950D+00	2.357872D+03	2.358872D+03	3.815383D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	9.115262D-02	5.978197D-03	7.671342D-01	-6.226428D-02
5.841923D-02	9.102502D-02	6.509914D-03	7.614627D-01	-6.736959D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
2.104714D-01	9.565077D+00	1.119045D+00	8.780490D-01	5.079940D+00
2.120801D-01	9.401214D+00	1.429184D-01		5.107869D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
3.596825D+00	5.530076D+00	1.187976D+00	8.402412D+00	9.864679D+00
3.361056D+00	-3.002286D+00	1.458764D+00	8.198218D+00	9.678861D+00
CAPVF	ALPHA	BETAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
1.523021D+02	-1.302720D+01	3.071336D+01	3.409910D+02	6.596885D+00
1.542930D+02	-1.429380D+01	3.045551D+01	3.513634D+02	4.506708D+00

CASE 22

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMIF	CTFP	A90F	
RMTR	CTRP	A90RA	
4.867479D-01	9.067172D-02	1.640529D+00	
4.963690D-01	8.991920D-02	1.858821D+00	

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
2.904593D+01	1.109914D+03	2.415723D+03	3.724051D-02
2.880487D+01	1.205809D+03	2.416723D+03	9.049445D+02

STABILITY NOT CALCULATED FOR THIS CASE. SKIPPING TO NEXT CASE

V	RC	GM	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
1.300000D+02	0.0	2.430000D+04	2.378000D-03	1.763940D+03
4.400000D+01	-2.665293D+00	-4.195972D+00	-1.253855D+00	1.233476D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	6.239495D+00	-1.000000D+01	1.025374D+01	1.863862D+03
7.050000D+02	0.0	-7.648992D+00	0.0	1.207582D+04
THEOF	AICF	BITF	BICF	DFW
THEOR	AICR	BITR	BICR	LEFW
1.808986D+01	-3.224485D+00	2.800000D+00	2.800000D+00	2.591094D+03
1.842422D+01	2.705266D+00	4.000000D+00	4.000000D+00	-3.911438D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.825704D+01	-3.078525D+00	-1.969002D+00	-5.766228D-03	8.726388D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.243187D+04	8.405700D+02	-3.233263D+02	2.214811D+03	-8.246286D+01
1.220123D+04	6.553016D+02	4.655965D+02	2.053244D+03	2.169061D+03
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
2.687558D+04	-5.112101D+02	4.033652D+03	1.012094D+04	1.250430D+03
2.605292D+04	2.570102D+03	-8.535413D+03	-1.932317D+02	1.309612D+03
XR	L/DE	SHPTOT	WFF	NNLB
3.200600D+03	7.017512D+00	2.660042D+03	2.661042D+03	4.885304D-02
SIGOF	CISF	CPSF	AMTF	LAMDAF
SIGOR	CISR	CPSR	AMTR	LAMDAR
5.841923D-02	8.799698D-02	6.916030D-03	8.228544D-01	-7.399537D-02
5.841923D-02	8.634329D-02	7.243360D-03	8.270459D-01	-7.340672D-02
MUF	VF	DFFR	DF	A0F
MUR	VR	DFRF		A0R
3.046548D-01	6.487776D+00	1.406451D+00	9.041750D-01	4.838761D+00
3.071490D-01	6.323017D+00	1.760728D-02		4.787698D+00
AIF	BIF	BETA0F	B180F	A270F
AIR	BIR	BETA0R	B180R	A270R
3.517683D+00	-7.698722D-01	6.886889D-01	7.817377D+00	1.206169D+01
2.663812D+00	4.055786D+00	1.462988D+00	6.889082D+00	1.232765D+01
CAPVF	ALPHA	BETAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
2.195854D+02	-1.200655D+01	3.497859D+02	3.513524D+02	3.600944D+00
2.212540D+02	-1.184845D+01	3.498697D+02	3.529985D+02	4.852350D+00

CASE 17

3

TP

MFF
NFF

ZFF
YFF

XFF
LFF

0.0
0.0

0.0
0.0

0.0
0.0

0.0

RMTR
RMTR
4.365467D-01
4.288502D-01

CTFP
CTRP
8.744897D-02
8.561319D-02

A90F
A90RA
7.666567D-01
7.138373D-01

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF
DELHPR

RHPF
RHPR

SHPTOT
WFF

NMLB
RP

7.445738D+01
7.289433D+01

1.324888D+03
1.382506D+03

2.807394D+03
2.808394D+03

4.628981D-02
1.124842D+03

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
7.552682D+02	1.773500D+04	1.157010D+05	1.067690D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-4.693895D-02	9.180403D-02	2.900840D-02	2.777519D-01
6.909016D-03	5.387598D-01	4.558838D-02	1.492641D+00
4.952783D-02	-7.829678D-02	-2.390858D-02	1.070011D+01
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
2.120424D-02	-1.314787D+00	3.921012D-01	-7.674556D+00
-4.330308D-03	-2.200874D+00	-6.139698D-01	-9.355302D-01
-7.267266D-01	-4.322602D-01	2.016821D-01	-1.570038D+02
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-2.230502D-03	2.328705D-01	5.021338D-01	1.212439D-01
1.124299D-03	-1.393218D+00	6.662946D-03	2.428962D-01
9.070257D-03	-3.438292D-01	1.337847D-01	1.959560D+00
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
2.501974D-02	-7.812430D-01	-1.249249D-02	-1.433803D-01
-1.470434D-01	-5.387195D-02	8.733435D-01	-3.176762D+01
-3.389671D-02	-1.580169D-01	1.725762D-02	-7.323128D+00
LU	LP	LDELB	LDELTAC
LW	LQ	LDELS	LBETA
	LR	LDELR	LALPHA
2.142914D-03	-5.325817D-01	-4.750988D-02	-4.003754D-02
-1.844431D-02	5.996011D-02	4.132297D-01	-3.984753D+00
-1.592161D-02	-1.548380D-02	-1.340950D-01	-3.439742D+00
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
5.804944D-04	-2.026635D-02	7.170768D-02	-5.128932D-03
2.289624D-03	-1.646903D-01	1.611263D-02	4.946560D-01
1.181120D-03	-8.315143D-02	1.718999D-01	2.551721D-01

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	-0.833D-05	-0.587D-02	0.108D-03	0.234D-01	-0.155D-02	0.597D-01
CTR	0.169D-06	0.119D-03	0.922D-04	0.199D-01	0.227D-02	0.482D-01
CHP	0.169D-05	0.119D-02	0.912D-05	0.197D-02	0.230D-03	0.686D-02
CHR	0.241D-05	0.170D-02	0.593D-05	0.128D-02	0.792D-04	0.501D-02
AIF	0.472D-03	0.333D+00	0.113D-02	0.243D+00	-0.974D-01	0.989D+00
AIR	0.557D-03	0.392D+00	0.970D-03	0.209D+00	-0.493D-01	0.887D+00
VFR	-0.395D-01	-0.278D+02	0.138D+00	0.297D+02	-0.204D+01	0.748D+02
VRR	-0.269D-01	-0.190D+02	0.116D+00	0.251D+02	-0.291D+01	0.593D+02
LF			0.646D+02	0.140D+05		
DF			-0.305D+01	-0.659D+03		
MF			0.270D+03	0.583D+05		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.302D-05	-0.653D-03	-0.125D-03	-0.473D-04	0.524D-02
CYR	0.297D-05	0.642D-03	0.120D-03	0.242D-05	0.510D-02
BIF	-0.284D-03	-0.613D-01	-0.705D-01	-0.170D-01	0.104D+01
BIR	0.337D-03	0.728D-01	0.645D-01	0.161D-03	0.999D+00
YF	-0.966D+02	-0.209D+05			
LF	-0.165D+03	-0.357D+05			
NF	0.256D+03	0.552D+05			
CTF					0.372D-02
CTR					-0.525D-02

FORCE = 0.241446D+07

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X	BICF	BICR	OMEGAF	OMEGAR
Z	0.113D+02	0.125D+02	0.0	0.0
M	0.624D+02	0.754D+02	0.0	0.0
Y	-0.110D+02	0.669D+01	0.0	0.0
L	0.150D+01	0.188D+01	0.0	0.0
N	0.287D+00	0.634D+00	0.0	0.0
	-0.200D+00	0.244D+00	0.0	0.0
CTF	-0.234D-01	0.155D-05	0.0	0.0
CTR	0.442D-02	-0.233D-01	0.0	0.0
CHF	-0.720D-02	0.272D-06	0.0	0.0
CHR	0.261D-03	-0.678D-02	0.0	0.0
ATF	-0.124D+01	0.574D-04	0.0	0.0
AIR	0.431D-01	-0.124D+01	0.0	0.0
VFR	-0.293D+02	-0.231D-01	0.0	0.0
QF	0.574D+01	-0.290D+02	0.0	0.0
QR	-0.125D+02	-0.878D-03	0.0	0.0
	0.335D+01	-0.141D+02	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELR	QFALPHA
	-0.722D-02	-0.953D+00	0.126D+01	0.226D+01
	0.275D-02	0.803D+00	0.424D-01	0.594D+00
	0.612D-01	-0.107D+01	0.615D-01	0.132D+02
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELR	QRALPHA
	-0.264D-02	-0.707D+00	-0.144D+01	0.231D+01
	0.711D-03	0.227D+01	0.598D-01	0.154D+00
	0.670D-01	0.101D+01	-0.153D+00	0.145D+02

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V	RC	GM	RHO	XF LM
FE	ALPHA	ALFF	THETA	LF LM
1.300000D+02	0.0	2.430000D+04	2.378000D-03	1.597404D+03
4.400000D+01	-1.818893D+00	-3.338415D+00	-1.105272D+00	1.230802D+04
VTF	CGF	BETAF	PSI	XR LM
VTR	CGL	PHI	GAMMA	LR LM
7.050000D+02	6.239495D+00	-7.000000D+00	7.140852D+00	1.743063D+03
7.050000D+02	0.0	-5.622264D+00	0.0	1.203956D+04
THEOF	AICF	B1TF	B1CF	DFW
THEOR	AICR	B1TR	B1CR	LFFW
1.769107D+01	-2.792878D+00	2.800000D+00	2.800000D+00	2.549497D+03
1.801993D+01	1.369686D+00	4.000000D+00	4.000000D+00	-2.264912D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.785550D+01	-3.089878D+00	-1.380198D+00	-2.408380D-01	8.415117D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.238320D+04	8.339421D+02	-3.103367D+02	2.220414D+03	-7.328367D+01
1.214890D+04	6.273897D+02	2.502201D+02	1.896853D+03	1.527909D+03
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
2.308039D+04	-3.072989D+02	2.941184D+03	7.016081D+03	1.160191D+03
2.426950D+04	2.541024D+03	-8.195570D+03	2.906414D+03	1.219964D+03
XR	L/DE	SHPTOT	WFF	NMLB
2.855317D+03	7.237671D+00	2.480155D+03	2.481155D+03	5.239495D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.861923D-02	8.764770D-02	6.416924D-03	8.234834D-01	-6.991036D-02
5.861923D-02	8.592952D-02	6.747525D-03	8.269449D-01	-6.984591D-02
MUF	VF	DFFR	DFF	AOF
MUR	VR	DFRF		AOR
3.054691D-01	6.459316D+00	1.476067D+00	9.076446D-01	4.789668D+00
3.078089D-01	6.296166D+00	8.733789D-03		4.720304D+00
A1F	B1F	BETA0F	B180F	A270F
A1R	B1R	BETA0R	B180R	A270R
3.564865D+00	-5.660836D-01	6.019318D-01	7.823013D+00	1.186541D+01
2.751990D+00	2.842409D+00	1.324709D+00	6.923788D+00	1.205164D+01
CAPVF	ALPHA F	BETAFW	AT1PF	BP1PF
CAPVR	ALPHA R	BETARW	AT1PR	BP1PR
2.195729D+02	-1.124758D+01	3.528661D+02	3.522460D+02	3.609531D+00
2.212138D+02	-1.119415D+01	3.529206D+02	3.539331D+02	3.956354D+00

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CASE 23

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMIF	CTFP	A90F	
RMIR	CTRP	A90RA	
4.358673D-01	8.725935D-02	7.064590D-01	
4.304721D-01	8.535611D-02	6.718120D-01	

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
7.429594D+01	1.234487D+03	2.627126D+03	4.946490D-02
7.267544D+01	1.292639D+03	2.628126D+03	1.201997D+03

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

V	RC	GW	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
1.300000D+02	0.0	2.430000D+04	2.378000D-03	1.497897D+03
4.400000D+01	-1.337250D+00	-2.857362D+00	-1.072938D+00	1.226649D+04
VTF	CGF	BEIAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	6.239495D+00	-4.000000D+00	4.073584D+00	1.677397D+03
7.050000D+02	0.0	-3.535437D+00	0.0	1.202210D+04
THEOF	AICF	B1TF	BICF	DFW
THEOR	AICR	B1TR	B1CR	LEFW
1.742019D+01	-1.756705D+00	2.800000D+00	2.800000D+00	2.540667D+03
1.783977D+01	2.826202D-01	4.000000D+00	4.000000D+00	-9.586558D+01
THEIAC	DELTAB	DELTAS	DELTAR	DELTAC
1.762998D+01	-3.176516D+00	-6.969090D-01	-2.881328D-01	8.240294D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.232968D+04	8.304092D+02	-1.600285D+02	2.249239D+03	3.354163D+02
1.212328D+04	6.086965D+02	1.011094D+02	1.828140D+03	1.153959D+03
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
2.186374D+04	-1.551318D+02	1.763038D+03	3.587519D+03	1.099033D+03
2.345369D+04	2.537738D+03	-7.542959D+03	2.948459D+03	1.178956D+03
XR	L/DE	SHPTOT	WFF	NMLB
2.658232D+03	7.366774D+00	2.377989D+03	2.378989D+03	5.464507D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	8.724572D-02	6.078665D-03	8.246903D-01	-6.756596D-02
5.841923D-02	8.646818D-02	6.520711D-03	8.268464D-01	-6.779481D-02
MUF	VF	DFFR	DFP	AOF
MUR	VR	DFRF		AOR
3.059086D-01	6.434411D+00	1.515671D+00	9.148283D-01	4.746119D+00
3.081605D-01	6.283966D+00	2.865165D-03		4.648245D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BEIAOR	B180R	A270R
3.683908D+00	2.837760D-01	4.446922D-01	7.902866D+00	1.174972D+01
2.830139D+00	2.078598D+00	1.217826D+00	6.934472D+00	1.194638D+01
CAPVF	ALPHAF	BEIAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
2.195656D+02	-1.081516D+01	3.559287D+02	3.528467D+02	3.694822D+00
2.211835D+02	-1.081733D+01	3.559585D+02	3.544929D+02	3.511447D+00

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMIF	CTFP	A90F	
RMTR	CTRP	A90RA	
4.347956D-01	8.696494D-02	6.543012D-01	
4.314583D-01	8.523228D-02	5.618376D-01	

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
7.404526D+01	1.173078D+03	2.524604D+03	5.147283D-02
7.257001D+01	1.251526D+03	2.525604D+03	1.250790D+03

STABILITY NOT CALCULATED FOR THIS CASE. SKIPPING TO NEXT CASE

V	RC	GN	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
1.300000D+02	0.0	2.430000D+04	2.378000D-03	1.428582D+03
4.400000D+01	-1.083190D+00	-2.625984D+00	-1.083217D+00	1.225306D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	6.239495D+00	0.0	1.010817D-02	1.647009D+03
7.050000D+02	0.0	-5.368465D-01	0.0	1.210442D+04
THEOF	AICF	BIIF	BICF	DFW
THEOR	AICR	BITR	BICR	LFFW
1.729076D+01	-3.991898D-01	2.800000D+00	2.800000D+00	2.539126D+03
1.777400D+01	-4.010202D-01	4.000000D+00	4.000000D+00	-1.194912D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.753238D+01	-3.226326D+00	2.739090D-04	-1.658340D-01	8.164636D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.230700D+04	8.461516D+02	3.626229D+01	2.336705D+03	9.514739D+02
1.220066D+04	6.111350D+02	4.643851D+01	1.720337D+03	9.888754D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
2.126262D+04	-1.674698D+02	2.387205D+02	9.876602D+02	1.068816D+03
2.330250D+04	2.536413D+03	-6.007064D+03	7.636177D+02	1.171356D+03
XR	L/DE	SHPTOT	WFF	NMLB
2.539063D+03	7.312597D+00	2.340172D+03	2.341172D+03	5.552774D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAR
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	8.727108D-02	5.911539D-03	8.259065D-01	-6.631751D-02
5.841923D-02	8.679127D-02	6.478676D-03	8.264180D-01	-6.676240D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
3.061380D-01	6.428378D+00	1.535672D+00	9.281690D-01	4.757924D+00
3.083416D-01	6.322782D+00	6.766253D-42		4.737631D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
3.796780D+00	1.545052D+00	3.262549D-01	8.024888D+00	1.177896D+01
2.794341D+00	1.605803D+00	1.296990D+00	6.986552D+00	1.197524D+01
CAPVF	ALPHA	BETAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPIPR
2.195622D+02	-1.058319D+01	5.924550D-19	3.532136D+02	4.099113D+00
2.211664D+02	-1.061603D+01	5.882210D-19	3.547112D+02	3.222878D+00

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTR	CTFP	A90F	
4.331565D-01	CTR	A90RA	
4.31888D-01	8.686971D-02	6.371966D-01	
	8.581590D-02	6.557453D-01	

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
7.396418D+01	1.142781D+03	2.487203D+03	5.224654D-02
7.306693D+01	1.244423D+03	2.488203D+03	1.269591D+03

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

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V	RC	GM	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
1.300000D+02	0.0	2.430000D+04	2.378000D-03	1.479471D+03
4.400000D+01	-1.351491D+00	-2.886922D+00	-1.117040D+00	1.232541D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	6.239495D+00	4.000000D+00	-4.046487D+00	1.707104D+03
7.050000D+02	0.0	2.115195D+00	0.0	1.212921D+04
THEOF	AICF	BITF	BICF	DFW
THEOR	AICR	BITR	BICR	FFW
1.748460D+01	1.362109D+00	2.800000D+00	2.800000D+00	2.534517D+03
1.789934D+01	-9.524391D-01	4.000000D+00	4.000000D+00	-2.347801D+02
THEIAC	DELIAB	DELIAS	DELIAR	DELIAC
1.769197D+01	-3.172727D+00	7.971018D-01	2.652705D-02	8.288347D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.238387D+04	8.626461D+02	3.276999D+02	2.490435D+03	1.844041D+03
1.223413D+04	5.982734D+02	3.014366D+01	1.629734D+03	9.234693D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
2.214757D+04	-2.944933D+02	-1.185223D+03	-1.782904D+03	1.113300D+03
2.389006D+04	2.528274D+03	-6.762527D+03	-4.429740D+03	1.200891D+03
XR	L/DE	SHPTOT	WFF	NMLB
2.669239D+03	7.193027D+00	2.414191D+03	2.415191D+03	5.382598D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	8.813537D-02	6.157575D-03	8.268392D-01	-6.771249D-02
5.841923D-02	8.713280D-02	6.642031D-03	8.260072D-01	-6.786527D-02
MUF	VF	DFFR	DFF	AOF
MUR	VR	DFRF		AOR
3.058941D-01	6.484005D+00	1.491716D+00	9.150356D-01	4.808400D+00
3.081493D-01	6.359934D+00	2.862229D-03		4.771779D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
3.824079D+00	3.275229D+00	2.700125D-01	8.012951D+00	1.178379D+01
2.746175D+00	1.309270D+00	1.294608D+00	6.889505D+00	1.180429D+01
CAPVF	ALPHAF	BETAFF	ATIPF	BPIPF
CAPVR	ALPHAR	BETARW	ATIPR	BPIPR
2.195656D+02	-1.082943D+01	4.071456D+00	3.529726D+02	5.034949D+00
2.211708D+02	-1.081102D+01	4.041610D+00	3.543947D+02	3.042312D+00

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CASE 26

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMTF	CTFP	A90F
RMTR	CTRP	A90RA
4.306138D-01	8.738263D-02	5.991993D-01
4.322552D-01	8.599166D-02	6.684127D-01

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
7.440090D+01	1.187701D+03	2.561808D+03	5.072561D-02
7.321657D+01	1.274107D+03	2.562808D+03	1.232632D+03

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

V	RC	GM	RHO	XF LM
FE	ALPHA	ALFF	THETA	LF LM
1.300000D+02	0.0	2.430000D+04	2.378000D-03	1.500844D+03
4.400000D+01	-1.571762D+00	-3.092422D+00	-1.043894D+00	1.233762D+04
VTF	CGF	BETAF	PSI	XR LM
VTR	CGL	PHI	GAMMA	LR LM
7.050000D+02	6.239495D+00	7.000000D+00	-7.094548D+00	1.746263D+03
7.050000D+02	0.0	4.246791D+00	0.0	1.209331D+04
THEOF	AICF	BITF	BICF	DFW
THEOR	AICR	BITR	BICR	FFW
1.760221D+01	2.152976D+00	2.800000D+00	2.800000D+00	2.529263D+03
1.800833D+01	-2.031798D+00	4.000000D+00	4.000000D+00	-2.596985D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.780527D+01	-3.150327D+00	1.389951D+00	-5.486749D-02	8.376177D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.239728D+04	8.813851D+02	4.203414D+02	2.580754D+03	2.061093D+03
1.220453D+04	5.891133D+02	-1.230198D+02	1.577624D+03	5.008750D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
2.267992D+04	-3.289759D+02	-2.340803D+03	-4.641300D+03	1.140060D+03
2.435305D+04	2.521188D+03	-7.603779D+03	-3.762919D+03	1.224164D+03
XR	L/DE	SHPTOT	WFF	NMLB
2.752301D+03	7.104133D+00	2.464225D+03	2.465225D+03	5.273353D-02
SIGOF	CISF	CPSF	AMTF	LAMDAF
SIGOR	CISR	CPSR	AMTR	LAMDAR
5.841923D-02	8.781488D-02	6.305583D-03	8.268592D-01	-6.862193D-02
5.841923D-02	8.694628D-02	6.770756D-03	8.252977D-01	-6.872938D-02
MUF	VF	DFFR	DF	A0F
MUR	VR	DFRF		A0R
3.057260D-01	6.472850D+00	1.490763D+00	9.052285D-01	4.828056D+00
3.080089D-01	6.323140D+00	8.739311D-03		4.728401D+00
A1F	B1F	BETA0F	B180F	A270F
A1R	B1R	BETA0R	B180R	A270R
3.746043D+00	3.842999D+00	4.240477D-01	8.030048D+00	1.209838D+01
2.643036D+00	4.914501D-01	1.451730D+00	6.824971D+00	1.201709D+01
CAPVF	ALPHA	BETAFW	AT1PF	BPTPF
CAPVR	ALPHAR	BETARW	AT1PR	BPTPR
2.195727D+02	-1.100243D+01	7.128749D+00	3.526743D+02	5.366701D+00
2.211957D+02	-1.098019D+01	7.075640D+00	3.540713D+02	2.688339D+00

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PAGE 4

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMIF	CTFP	A90F
RMIR	CIRP	A90RA
4.298130D-01	8.746924D-02	6.517542D-01
4.334505D-01	8.573717D-02	6.661163D-01

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	NFF	RP
7.447464D+01	1.214535D+03	2.611699D+03	4.975697D-02
7.299989D+01	1.297164D+03	2.612699D+03	1.209094D+03

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

V	RC	GM	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
1.300000D+02	0.0	2.430000D+04	2.378000D-03	1.600634D+03
4.400000D+01	-2.185290D+00	-3.704611D+00	-1.060236D+00	1.233120D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	6.239495D+00	1.000000D+01	-1.017011D+01	1.845738D+03
7.050000D+02	0.0	6.205655D+00	0.0	1.204313D+04
THEOF	AICF	BITF	BICF	DFW
THEOR	AICR	BITR	BICR	FFW
1.789591D+01	2.581428D+00	2.800000D+00	2.800000D+00	2.526905D+03
1.826036D+01	-3.561854D+00	4.000000D+00	4.000000D+00	-2.808479D+02
THEIAC	DELTAB	DELIAS	DELIAR	DELIAC
1.807813D+01	-3.102074D+00	2.046773D+00	-2.904154D-01	8.587700D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.240223D+04	8.973261D+02	4.366545D+02	2.691350D+03	2.142091D+03
1.217010D+04	5.764611D+02	-3.798553D+02	1.493947D+03	-2.495584D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
2.398150D+04	-3.769977D+02	-3.438780D+03	-8.213245D+03	1.205487D+03
2.538228D+04	2.514358D+03	-8.325659D+03	-3.491396D+02	1.275901D+03
XR	L/DE	SHPTOT	WFF	NMLB
3.006784D+03	7.024027D+00	2.581388D+03	2.582388D+03	5.034101D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	8.792830D-02	6.667454D-03	8.267004D-01	-7.146090D-02
5.841923D-02	8.597012D-02	7.056906D-03	8.234497D-01	-7.110141D-02
MUF	VF	DFFR	DFF	A0F
MUR	VR	DFRF		A0R
3.051775D-01	6.473754D+00	1.437208D+00	8.991181D-01	4.865056D+00
3.075633D-01	6.305820D+00	1.767748D-02		4.728252D+00
A1F	B1F	BETA0F	B180F	A270F
A1R	B1R	BETA0R	B180R	A270R
3.688662D+00	4.199733D+00	5.002004D-01	8.001476D+00	1.226051D+01
2.317432D+00	-8.252363D-01	1.768023D+00	6.503572D+00	1.197425D+01
CAPVF	ALPHAF	BETA0F	ATIPF	BPIPF
CAPVR	ALPHAR	BETA0R	ATIPR	BPIPR
2.195845D+02	-1.153410D+01	1.019997D+01	3.520034D+02	5.589632D+00
2.212158D+02	-1.142529D+01	1.012001D+01	3.531321D+02	2.459981D+00

PAGE 4

CASE 18

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTF	CTFP	A90F	
RMTR	CTRP	A90RA	
4.294558D-01	8.742370D-02	6.909560D-01	
4.351660D-01	8.538137D-02	7.567712D-01	

NON UNIFORM DOWNWASH POWER CORRECTIONS			
DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
7.443586D+01	1.279923D+03	2.728521D+03	4.762741D-02
7.269695D+01	1.348598D+03	2.729521D+03	1.157346D+03

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
7.552682D+02	1.773500D+04	1.157010D+05	1.067690D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-4.851604D-02	7.434749D-02	2.160783D-02	3.120021D-01
-4.497733D-03	5.845437D-01	-5.110443D-02	-9.720230D-01
3.928504D-02	-7.925522D-03	-3.895292D-02	8.490045D+00
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
2.315368D-02	-1.671676D-01	4.314681D-01	-7.669774D+00
3.226719D-04	-2.095889D+00	6.119708D-01	6.973390D-02
-7.213545D-01	-4.893664D-01	-1.135673D-02	-1.558948D+02
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	NALPHA
-2.342582D-03	2.360339D-01	5.042626D-01	1.127782D-01
-3.30085D-04	-1.238438D+00	-2.347511D-02	-7.131945D-02
8.755720D-03	-4.323928D-01	-1.328066D-01	1.892233D+00
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
-1.873780D-02	-7.985975D-01	-4.735069D-02	1.723694D-01
-1.439059D-01	1.437611D-01	8.702295D-01	-3.110007D+01
3.404175D-02	-1.353199D-01	1.848631D-02	7.356897D+00
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
-8.237528D-04	-5.568123D-01	-7.875253D-02	3.243109D-02
-2.390768D-02	2.048652D-01	4.117651D-01	-5.166784D+00
1.201850D-02	2.141494D-02	-1.306644D-01	2.597366D+00
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
-9.171279D-04	-2.010374D-02	9.538576D-02	5.599916D-04
2.342109D-03	-2.413994D-01	1.527625D-02	5.061625D-01
-2.163942D-03	-1.252036D-01	1.585091D-01	-4.676581D-01

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	-0.572D-05	-0.615D-02	0.108D-03	0.233D-01	-0.133D-02	0.592D-01
CTR	0.245D-06	0.172D-03	0.927D-04	0.200D-01	0.202D-02	0.486D-01
CHF	0.166D-05	0.117D-02	0.897D-05	0.194D-02	-0.178D-03	0.706D-02
CHR	0.252D-05	0.178D-02	0.615D-05	0.133D-02	0.202D-04	0.456D-02
AIF	0.453D-03	0.319D+00	0.112D-02	0.241D+00	-0.809D-01	0.987D+00
AIR	0.558D-03	0.393D+00	0.971D-03	0.210D+00	-0.652D-01	0.890D+00
VFR	-0.395D-01	-0.278D+02	0.137D+00	0.295D+02	-0.177D+01	0.740D+02
VRR	-0.266D-01	-0.188D+02	0.117D+00	0.253D+02	0.260D+01	0.598D+02
LF			0.610D+02	0.132D+05		
DF			0.439D+01	0.949D+03		
MF			0.277D+03	0.598D+05		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.300D-05	-0.648D-03	-0.123D-03	-0.990D-04	0.521D-02
CYR	0.293D-05	0.634D-03	0.126D-03	-0.570D-04	0.507D-02
BIF	-0.252D-03	-0.544D-01	-0.581D-01	-0.175D-01	0.100D+01
BIR	0.395D-03	0.853D-01	0.768D-01	-0.603D-03	0.105D+01
YF	-0.944D+02	-0.204D+05			
LF	-0.265D+03	-0.572D+05			
NF	0.268D+03	0.580D+05			
CTF					-0.455D-02
CTR					0.461D-02

FORCE = 0.241446D+07

X	BICF	BICR	OMEGAF	OMEGAR
Z	0.114D+02	0.117D+02	0.0	0.0
M	0.614D+02	0.765D+02	0.0	0.0
Y	-0.109D+02	0.686D+01	0.0	0.0
L	-0.133D+01	-0.211D+01	0.0	0.0
N	-0.827D-01	-0.927D+00	0.0	0.0
	-0.758D+00	0.670D+00	0.0	0.0
CTF	-0.231D-01	0.236D-05	0.0	0.0
CTR	-0.449D-02	-0.237D-01	0.0	0.0
CHF	-0.724D-02	0.508D-06	0.0	0.0
CHR	0.282D-03	-0.661D-02	0.0	0.0
AIF	-0.124D+01	0.975D-04	0.0	0.0
AIR	0.441D-01	0.124D+01	0.0	0.0
VFR	-0.290D+02	-0.381D-01	0.0	0.0
VRR	0.581D+01	-0.294D+02	0.0	0.0
QF	-0.111D+02	0.924D-03	0.0	0.0
QR	0.255D+01	-0.139D+02	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELR	QFALPHA
	-0.777D-02	0.869D+00	0.124D+01	0.220D+01
	-0.185D-02	0.439D+00	-0.624D-01	-0.400D+00
	0.610D-01	-0.826D+00	-0.936D-01	0.132D+02
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELR	QRALPHA
	-0.443D-02	0.121D+01	-0.137D+01	0.234D+01
	-0.189D-02	0.224D+01	-0.222D-01	-0.408D+00
	0.513D-01	0.128D+01	0.798D-01	0.111D+02

CATALOG OF TRIM & STABILITY DERIVATIVE DATA

A-97 TRIM ANALYSIS (CH-46E)

GW = 24,300 lb CG = 6 in. fwd

<u>ALTITUDE</u>	<u>AIRSPEED</u>	<u>CLIMB RATE</u>	<u>SIDESLIP</u>	<u>DERIVATIVES</u>
0 ft	-45 kt swd	0 ft /min	-90 deg	
	-30			X
	-15			
	15		90	
	30			X
	45			

V	RC	GW	RHO	XF LW
FE	ALPHA	ALFF	THEIA	LF LW
4.500000D+01	0.0	2.430000D+04	2.378000D-03	1.257266D+03
4.400000D+01	-9.000000D+01	-9.000000D+01	6.129292D+00	1.314838D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	6.239495D+00	-9.000000D+01	9.000000D+01	1.627144D+03
7.050000D+02	0.0	-6.599953D+00	0.0	1.328966D+04
THEOF	AICF	B1TF	BICF	DPW
THEOR	AICR	B1TR	BICR	LFFW
1.569591D+01	-1.217324D+00	-2.500000D+00	-2.500000D+00	2.452204D+03
1.637186D+01	2.978511D+00	-2.500000D+00	-2.500000D+00	-4.276483D-12
THETAC	DELTA	DELTA	DELTA	DELTA
1.603388D+01	-5.289134D-01	-1.395326D+00	4.277345D-01	7.003009D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.319782D+04	5.274881D+02	2.273361D+02	1.107676D+03	5.502291D+02
1.337241D+04	6.642150D+02	1.316290D+02	2.048653D+03	3.550978D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.786475D+04	-2.452204D+03	2.688606D+03	2.688606D+02	8.980140D+02
2.058535D+04	1.786875D-29	2.942645D+03	-3.226328D+03	1.034771D+03
XR	L/DE	SHPTOT	NFF	NMLB
2.645756D+04	-2.068603D+00	2.032785D+03	2.033785D+03	2.212623D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	9.351788D-02	4.966844D-03	6.944083D-01	-4.126029D-02
5.841923D-02	9.492331D-02	5.723239D-03	6.981096D-01	-4.522556D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
1.071132D-01	1.880580D+01	2.353723D-01	7.829815D-01	5.130284D+00
1.071044D-01	1.880310D+01	8.947077D-02		5.277028D+00
A1F	B1F	BETAOF	B180F	A270F
A1R	B1R	BETAOR	B180R	A270R
8.589987D-01	-1.815467D+00	4.201223D+00	5.923965D+00	6.813850D+00
-6.233154D-01	3.319739D+00	5.819887D+00	4.576774D+00	7.291403D+00
CAPVF	ALPHAF	BETAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
7.621111D+01	-7.750865D+00	2.689087D+02	2.613590D+02	2.008432D+00
7.663229D+01	-9.823946D+00	2.691942D+02	2.623767D+02	3.377749D+00

PAGE 4

CASE 28

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTR	CTFP	A90F	
5.622428D-01	CTR	A90RA	
5.570753D-01	9.321721D-02	3.036389D+00	
	9.421884D-02	3.126393D+00	

4

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
4.220467D+00	9.022345D+02	2.041272D+03	2.203429D-02
4.265817D+00	1.039037D+03	2.042272D+03	5.354332D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

CASE 19

PAGE 3

V	RC	GM	RH0	XF LW
FE	ALPHA	ALFF	THETA	LF LW
3.000000D+01	0.0	2.430000D+04	2.378000D-03	9.659157D+02
4.400000D+01	-9.000000D+01	-9.000000D+01	5.900262D+00	1.269282D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	6.239495D+00	-9.000000D+01	9.000000D+01	1.759301D+03
7.050000D+02	0.0	-3.591425D+00	0.0	1.271553D+04
THEOF	AICF	B1TF	B1CF	DFW
THEOR	AICR	B1TR	B1CR	FFW
1.568754D+01	-7.273918D-01	-2.500000D+00	-2.500000D+00	1.307062D+03
1.619115D+01	1.901184D+00	-2.500000D+00	-2.500000D+00	-4.102976D-12
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.593935D+01	-3.940627D-01	-8.655014D-01	2.821225D-01	6.929728D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.271827D+04	5.349793D+02	1.566248D+02	1.284360D+03	4.038144D+02
1.282181D+04	6.173713D+02	6.958898D+01	1.886577D+03	1.926169D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.835410D+04	-1.307062D+03	1.433068D+03	1.433068D+02	9.226124D+02
2.036950D+04	7.619456D-30	1.568475D+03	-1.719682D+03	1.023921D+03
XR	L/DE	SHPTOT	WFF	NNLB
2.543362D+04	-7.549792D+00	2.046534D+03	2.047534D+03	1.465177D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LANDAR
5.841923D-02	9.039400D-02	5.102896D-03	6.719780D-01	-4.364139D-02
5.841923D-02	9.084031D-02	5.663227D-03	6.759959D-01	-4.793904D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF	DF	AOR
7.173355D-02	2.476005D+01	2.567465D-01	1.005549D+00	4.973748D+00
7.173181D-02	2.428357D+01	1.183762D-01		5.048914D+00
AIF	BIF	BETAOF	B16CF	A270F
AIR	BIR	BETAOR	B18OR	A270R
6.341122D-01	-2.092472D+00	4.308172D+00	5.578065D+00	5.938983D+00
-3.360858D-01	3.062139D+00	5.348558D+00	4.676765D+00	6.282732D+00
CAPVF	ALPHAF	BETAFN	ATIPF	BPTPF
CAPVR	ALPHAR	BETARN	ATIPR	BPTPR
5.092624D+01	-6.760446D+00	2.694088D+02	2.611341D+02	2.186444D+00
5.145461D+01	-1.063401D+01	2.695634D+02	2.626639D+02	3.080528D+00

PAGE 4

CASE 19

XFF	ZFF	MFF	TP
LFF	LFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMTF	CTFP	A90F
RMTB	CIRP	A90RA
5.849514D-01	8.998746D-02	3.532684D+00
5.800985D-01	9.014848D-02	3.561154D+00

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	NFF	RP
1.542818D+00	9.241552D+02	2.049622D+03	1.462971D-02
1.545579D+00	1.025467D+03	2.050622D+03	3.555019D+02

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
7.552682D+02	1.773500D+04	1.157010D+05	1.067690D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
2.064956D-03	5.702764D-02	8.230810D-02	5.621671D-01
-5.232525D-02	1.234309D+00	7.068620D-02	-1.665564D-01
3.791396D-02	-1.242596D-01	-1.154917D-02	1.206839D-01
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
-9.941207D-02	-3.959713D-01	7.616952D-02	-5.516278D+00
4.500487D-01	2.033968D-01	-6.805268D-01	1.432549D+00
-4.223271D-01	-9.716231D-02	4.960104D-02	-1.344309D+00
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
1.490785D-03	9.812043D-03	3.410587D-01	6.410472D-03
-9.647856D-03	-9.569029D-01	9.558806D-03	-3.071008D-02
9.404340D-04	-2.864959D-01	1.345849D-01	2.993494D-03
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
3.762063D-01	-1.449947D+00	2.285679D-02	3.105023D-01
-7.328735D-02	-5.670559D-02	9.460800D-01	-2.332809D-01
-1.919776D-02	-2.032903D-01	2.039541D-03	-6.110837D-02
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
6.076614D-04	-8.403660D-01	-4.110827D-02	5.945926D-02
-1.130915D-02	1.548738D-01	4.311804D-01	-3.599814D-02
2.528432D-03	-5.062780D-02	-1.460189D-01	8.048250D-03
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
-3.364545D-03	4.326613D-03	5.676421D-02	1.104768D-03
-9.641315D-05	-2.135222D-01	1.655577D-02	-3.068926D-04
4.074123D-04	-6.980098D-02	1.749122D-01	1.296834D-03

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	0.176D-04	0.124D-01	0.645D-04	0.205D-03	0.121D-02	0.401D-01
CTR	0.126D-04	0.886D-02	0.608D-04	0.194D-03	0.120D-02	0.388D-01
CHR	0.334D-05	0.236D-02	0.303D-05	0.963D-05	0.277D-03	0.156D-02
CHF	0.340D-05	0.240D-02	0.324D-05	0.103D-04	0.167D-03	0.202D-02
AIF	0.895D-03	0.631D+00	0.276D-03	0.878D-03	0.384D-01	0.186D+00
AIR	0.911D-03	0.642D+00	0.257D-03	0.819D-03	0.406D-01	0.189D+00
VFR	0.106D+00	0.749D+02	0.417D+00	0.133D+01	0.756D+01	0.151D+03
VRR	0.733D-01	0.517D+02	0.385D+00	0.122D+01	0.756D+01	0.138D+03
LF			0.174D+02	0.553D+02		
DF			0.613D-30	0.195D-29		
MF			-0.208D+02	-0.663D+02		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.436D-05	0.139D-04	0.224D-03	0.806D-04	0.553D-02
CYR	0.317D-05	0.101D-04	0.233D-03	0.159D-04	0.551D-02
BIF	-0.300D-03	0.954D-03	0.352D-01	0.608D-02	0.304D-01
BIR	-0.239D-03	0.761D-03	0.374D-01	0.494D-03	0.132D-01
YF	-0.372D+02	0.118D+03			
LF	-0.372D+01	0.118D+02			
NF	0.446D+02	0.142D+03			
CTF					0.432D-02
CTR					-0.470D-02

FORCE = 0.241446D+07

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X	BICF	BICR	OMEGAF	OMEGAR
Z	0.171D+02	0.174D+02	0.0	0.0
M	0.287D+01	0.161D+01	0.0	0.0
Y	-0.131D+01	-0.137D+01	0.0	0.0
L	0.396D+00	-0.396D+00	0.0	0.0
N	0.152D+00	-0.221D+00	0.0	0.0
	0.404D-01	0.347D-01	0.0	0.0
CTF	0.112D-04	-0.651D-06	0.0	0.0
CTR	-0.917D-05	0.168D-03	0.0	0.0
CHF	-0.543D-02	-0.124D-07	0.0	0.0
CHR	-0.112D-05	-0.547D-02	0.0	0.0
AIF	0.324D-01	-0.497D-05	0.0	0.0
AIR	-0.200D-03	-0.136D-01	0.0	0.0
VFR	0.194D+00	0.598D-02	0.0	0.0
VRR	0.564D-01	0.611D+00	0.0	0.0
QF	-0.281D+00	0.136D-03	0.0	0.0
QR	0.350D-03	0.325D+00	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELR	QFALPHA
	-0.163D-02	0.873D+00	0.726D+00	0.147D+01
	-0.614D-02	0.146D+01	-0.191D-01	0.195D-01
	-0.862D-02	-0.400D+00	-0.294D-01	-0.274D-01
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELR	QRALPHA
	-0.344D-03	0.382D+00	-0.785D+00	0.158D+01
	0.247D-02	0.126D+01	-0.479D-02	0.786D-02
	-0.191D-02	0.620D+00	0.101D-01	-0.609D-02

V	RC	GM	RHO	XF LM
FE	ALPHA	ALFF	THETA	LF LM
1.500000D+01	0.0	2.430000D+04	2.378000D-03	4.088915D+03
4.400000D+01	-9.000000D+01	-9.000000D+01	5.865739D+00	1.190978D+04
VTF	CGF	BETAF	PSI	XR LM
VTR	CGL	PHI	GAMMA	LR LM
7.050000D+02	6.239495D+00	-9.000000D+01	9.000000D+01	5.276246D+03
7.050000D+02	0.0	-2.827571D+00	0.0	1.153209D+04
THEOF	AICF	B1TF	BICF	DFW
THEOR	AICR	B1TR	BICR	LFFW
1.673190D+01	-1.489877D-01	-2.500000D+00	-2.500000D+00	1.000292D+03
1.707816D+01	1.024762D+00	-2.500000D+00	-2.500000D+00	-3.663330D-12
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.690503D+01	-2.709387D-01	-3.835648D-01	2.061041D-01	7.678318D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.258028D+04	5.465058D+02	1.348348D+02	1.434573D+03	3.756793D+02
1.266762D+04	5.992792D+02	3.397116D+01	1.742700D+03	1.108034D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	NF	NF	RHPR
2.303335D+04	-1.000292D+03	1.096723D+03	1.096723D+02	1.157927D+03
2.448825D+04	2.915575D-30	1.200350D+03	-1.316068D+03	1.230960D+03
XR	L/DE	SHPTOT	WFF	NMLB
2.514418D+04	8.411440D-01	2.488887D+03	2.489887D+03	6.024370D-03
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	8.927621D-02	6.404401D-03	6.495228D-01	-5.726380D-02
5.841923D-02	9.019774D-02	6.808344D-03	6.537560D-01	-6.036278D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF	AOR	AOR
3.589270D-02	3.043097D+01	3.884812D-01	1.416791D+00	5.010904D+00
3.589216D-02	2.949142D+01	2.954998D-01		5.096362D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
5.910546D-01	-2.334768D+00	4.377885D+00	5.588844D+00	5.569975D+00
-1.966844D-01	2.829566D+00	5.282285D+00	4.886834D+00	5.846450D+00
CAPVF	ALPHAF	BETAFW	AT1PF	BP1PF
CAPVR	ALPHAR	BETARW	AT1PR	BP1PR
2.718483D+01	-2.143603D+01	2.695350D+02	2.610911D+02	2.408420D+00
2.847412D+01	-2.729392D+01	2.696566D+02	2.628031D+02	2.836407D+00

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMIF	CIFP	A90F	
RMIR	CTRP	A90RA	
6.080453D-01	8.443600D-02	4.360060D+00	
6.033614D-01	8.175828D-02	4.395676D+00	

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
0.0	1.157927D+03	2.488887D+03	6.024370D-03
0.0	1.230960D+03	2.489887D+03	1.463922D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

V	RC	GM	RHO	XF LM
FE	ALPHA	ALFF	THETA	LF LM
1.500000D+01	0.0	2.330000D+04	2.378000D-03	3.976935D+03
4.400000D+01	-9.000000D+01	-9.000000D+01	5.871198D+00	1.195445D+04
VTF	CGF	BETAF	PSI	XR LM
VTR	CGL	PHI	GAMMA	LR LM
7.050000D+02	6.239495D+00	9.000000D+01	-9.000000D+01	5.261993D+03
7.050000D+02	0.0	2.366551D+00	0.0	1.153505D+04
THEOF	AICF	B1TF	BICF	DFW
THEOR	AICR	B1TR	BICR	LFFW
1.676450D+01	1.049683D+00	-2.500000D+00	-2.500000D+00	9.957757D+02
1.705242D+01	-9.314228D-01	-2.500000D+00	-2.500000D+00	-4.341418D-12
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.690846D+01	-2.252897D-01	6.564315D-01	-3.366035D-02	7.680976D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.258471D+04	5.916719D+02	4.324314D+01	1.738605D+03	9.981673D+01
1.266679D+04	5.461812D+02	-3.986824D+01	1.421054D+03	-1.555355D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
2.311899D+04	-9.957757D+02	-1.082720D+03	-1.082720D+02	1.162131D+03
2.443447D+04	2.902412D-30	1.194931D+03	1.299264D+03	1.228257D+03
XR	L/DE	SHPTOT	WFF	NMLB
2.514871D+04	8.403280D-01	2.490388D+03	2.491388D+03	6.020741D-03
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	8.935128D-02	6.427654D-03	6.536920D-01	-5.710582D-02
5.841923D-02	8.993116D-02	6.793392D-03	6.490460D-01	-6.021016D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
3.590517D-02	3.049091D+01	3.88147D-01	1.416109D+00	5.023712D+00
3.590479D-02	2.954878D+01	2.958976D-01		5.072584D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
-1.812991D-01	2.822868D+00	5.193868D+00	4.829976D+00	5.709158D+00
-2.641409D-01	-2.306626D+00	5.294703D+00	4.796312D+00	5.692561D+00
CAPVF	ALPHA F	BETAFW	AT1FF	BPTFF
CAPVR	ALPHAR	BETARW	AT1PR	BPTPR
2.713094D+01	-2.109273D+01	9.039025D+01	2.603187D+02	2.828684D+00
2.840684D+01	-2.699026D+01	9.028816D+01	2.627359D+02	2.321700D+00

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMIF	CTFP	A90F	
RMIR	CTRP	A90RA	
6.033313D-01	8.475272D-02	4.278392D+00	
6.086380D-01	8.177931D-02	4.485325D+00	

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
0.0	1.162131D+03	2.490388D+03	6.020741D-03
0.0	1.228257D+03	2.491388D+03	1.463040D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

PAGE 3

CASE 20

V	RC	GW	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
3.00000D+01	0.0	2.43000D+04	2.37800D-03	8.084877D+02
4.40000D+01	-9.00000D+01	-9.00000D+01	5.917542D+00	1.270789D+04
VTF	CGF	BEIAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.05000D+02	6.239495D+00	9.00000D+01	-9.00000D+01	1.764100D+03
7.05000D+02	0.0	3.202860D+00	0.0	1.270840D+04
THEOF	AICF	BITF	BICF	DFW
THEOR	AICR	BITR	BICR	LFFW
1.578436D+01	1.684353D+00	-2.50000D+00	-2.50000D+00	1.293321D+03
1.611347D+01	-1.607285D+00	-2.50000D+00	-2.50000D+00	-4.305269D-12
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.594891D+01	-2.575213D-01	1.093156D+00	-4.504351D-02	6.937142D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.271880D+04	6.132668D+02	2.649603D+01	1.882800D+03	8.846091D+01
1.281914D+04	5.339751D+02	-3.611527D+01	1.275540D+03	-1.279586D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.864853D+04	-1.299321D+03	-1.412769D+03	-1.412769D+02	9.374126D+02
2.015372D+04	7.574329D-30	1.559186D+03	1.695323D+03	1.013075D+03
XR	L/DE	SHPTOT	WFF	NMLB
2.543426D+04	-7.650291D+00	2.050488D+03	2.051488D+03	1.4623354D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	9.063663D-02	5.184755D-03	6.759846D-01	-4.326053D-02
5.841923D-02	9.076223D-02	5.603237D-03	6.716464D-01	-4.756386D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
7.176052D-02	2.481166D+01	2.568301D-01	1.000945D+00	5.002536D+00
7.175913D-02	2.433173D+01	1.184451D-01		5.029055D+00
AIF	BIF	BEIAOF	B180F	A270F
AIR	BIR	BEIAOR	B180R	A270R
-1.718788D-01	3.057012D+00	5.119465D+00	4.792771D+00	6.141177D+00
-2.218869D-01	-2.070022D+00	5.235907D+00	4.780121D+00	6.093112D+00
CAPVF	ALPHAF	BEIAFV	ATIPF	BPIPF
CAPVR	ALPHAR	BEIARV	ATIPR	BPIPR
5.090851D+01	-6.400816D+00	9.052932D+01	2.603281D+02	3.061841D+00
5.141687D+01	-1.028818D+01	9.039085D+01	2.627781D+02	2.081880D+00

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CASE 20

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMTR	CTFP	A90F
5.799146D-01	CTRP	A90RA
5.854157D-01	9.009429D-02	3.437278D+00
	9.009794D-02	3.673480D+00

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
1.544650D+00	9.389573D+02	2.053577D+03	1.460155D-02
1.544712D+00	1.014620D+03	2.054577D+03	3.548176D+02

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
7.552682D+02	1.773500D+04	1.157010D+05	1.067690D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
4.170723D-03	-5.240129D-03	4.136734D-02	5.648593D-01
-2.004050D-02	1.301570D+00	-7.427423D-02	-6.379089D-02
3.829478D-02	-8.666272D-02	-5.512177D-02	1.218961D-01
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
-1.149208D-01	2.255199D-01	8.041535D-02	-5.516162D+00
2.153646D-01	2.795527D-01	6.767404D-01	6.855269D-01
-4.218791D-01	-1.161551D-01	-5.940636D-02	-1.342883D+00
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
1.969477D-03	1.329667D-02	3.444767D-01	4.721580D-03
-9.864291D-03	-8.387250D-01	-9.505294D-03	-3.139901D-02
8.350371D-04	-2.934015D-01	-1.301692D-01	2.658006D-03
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
-3.732893D-01	-1.456122D+00	-3.869828D-03	-2.714658D-01
-5.260191D-02	3.763395D-02	9.405838D-01	-1.674371D-01
2.131444D-02	-1.653903D-01	-1.370256D-03	6.784598D-02
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
-7.536524D-04	-8.240349D-01	-3.600758D-02	-6.943494D-02
-7.725101D-03	1.605516D-01	4.284409D-01	-2.458976D-02
-1.431955D-03	-2.082593D-02	-1.486253D-01	-4.558055D-03
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
3.677259D-03	-7.744621D-03	3.974279D-02	-3.954536D-03
3.749194D-04	-1.954065D-01	1.700658D-02	1.193405D-03
-4.677837D-04	-8.347217D-02	1.764437D-01	-1.489002D-03

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	0.216D-04	0.152D-01	0.644D-04	0.205D-03	0.104D-02	0.400D-01
CTR	0.153D-04	0.108D-01	0.609D-04	0.194D-03	0.101D-02	0.389D-01
CHF	0.369D-05	0.260D-02	0.346D-05	0.110D-04	0.275D-03	0.204D-02
CHR	0.341D-05	0.240D-02	0.268D-05	0.852D-05	0.186D-03	0.149D-02
ALF	0.928D-03	0.654D+00	0.291D-03	0.925D-03	0.352D-01	0.191D+00
AIR	0.882D-03	0.622D+00	0.247D-03	0.787D-03	0.345D-01	0.184D+00
VFR	0.130D+00	0.919D+02	0.417D+00	0.133D+01	0.699D+01	0.151D+03
VRR	0.907D-01	0.639D+02	0.385D+00	0.123D+01	0.682D+01	0.138D+03
LF			0.172D+02	0.547D+02		
DF			-0.200D-30	0.638D-30		
NF			-0.206D+02	0.657D+02		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.230D-05	0.731D-05	0.225D-03	0.764D-04	0.549D-02
CYR	0.265D-05	0.844D-05	0.234D-03	0.247D-04	0.550D-02
BIF	0.900D-04	0.287D-03	0.366D-01	0.683D-02	0.121D-01
BIR	0.120D-03	0.382D-03	0.366D-01	0.111D-02	0.275D-01
YF	-0.278D+02	0.884D+02			
LF	-0.278D+01	0.884D+01			
NF	0.333D+02	0.106D+03			
CTF					-0.434D-02
CTR					0.472D-02

FORCE = 0.241446D+07

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CASE 20

X	BICF	BICR	OMEGAF	OMEGAR
Z	0.172D+02	0.174D+02	0.0	0.0
M	0.237D+01	0.212D+01	0.0	0.0
Y	-0.125D+01	-0.131D+01	0.0	0.0
L	0.388D+00	-0.402D+00	0.0	0.0
N	0.136D+00	-0.236D+00	0.0	0.0
	0.614D-01	0.535D-01	0.0	0.0
CTF	0.178D-03	0.838D-06	0.0	0.0
CTR	-0.142D-04	0.152D-05	0.0	0.0
CHR	-0.544D-02	0.906D-07	0.0	0.0
AIF	-0.150D-05	-0.547D-02	0.0	0.0
AIR	-0.122D-01	0.154D-04	0.0	0.0
VFR	0.225D-03	0.296D-01	0.0	0.0
VRR	0.813D+00	-0.973D-02	0.0	0.0
QF	-0.185D+00	-0.113D+00	0.0	0.0
QR	0.331D+00	-0.140D-03	0.0	0.0
	-0.194D-02	-0.297D+00	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELR	QFALPHA
	-0.207D-02	-0.387D+00	0.731D+00	0.148D+01
	-0.269D-02	0.141D+01	0.179D-01	-0.856D-02
	-0.837D-02	-0.738D+00	0.264D-01	-0.266D-01
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELR	QRALPHA
	0.510D-04	-0.486D+00	-0.783D+00	0.158D+01
	-0.429D-02	0.124D+01	0.569D-02	-0.137D-01
	-0.242D-02	0.677D+00	-0.115D-01	-0.770D-02

V	RC	GM	RHO	XF LM
FE	ALPHA	ALFF	THEIA	LF LM
4.500000D+01	0.0	2.430000D+04	2.378000D-03	1.059398D+03
4.400000D+01	-9.000000D+01	-9.000000D+01	6.190122D+00	1.318196D+04
VTF	CGF	BETAF	PSI	XR LM
VTR	CGL	PHI	GAMMA	LR LM
7.050000D+02	6.239495D+00	9.000000D+01	-9.000000D+01	1.671753D+03
7.050000D+02	0.0	6.188287D+00	0.0	1.327322D+04
THEOF	AICF	B1TF	BICF	DFW
THEOR	AICR	B1TR	B1CR	LFFW
1.579638D+01	2.269486D+00	-2.500000D+00	-2.500000D+00	2.444239D+03
1.619956D+01	-2.516276D+00	-2.500000D+00	-2.500000D+00	-4.262593D-12
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.599797D+01	-3.154812D-01	1.590942D+00	-1.381802D-01	6.975171D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.320904D+04	6.384142D+02	-1.262333D+01	2.012915D+03	-1.908023D+00
1.330766D+04	5.280709D+02	-6.502263D+01	1.094528D+03	-2.080338D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.814885D+04	-2.444239D+03	-2.657653D+03	-2.657653D+02	9.122951D+02
2.001862D+04	1.781071D-29	2.933087D+03	3.189183D+03	1.006283D+03
XR	L/DE	SHPTOI	WFF	NMLB
2.646563D+04	-2.049259D+00	2.018579D+03	2.019579D+03	2.228188D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	9.336432D-02	5.045832D-03	6.983077D-01	-4.058341D-02
5.841923D-02	9.448184D-02	5.565674D-03	6.939271D-01	-4.453994D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
1.071940D-01	1.884319D+01	2.353946D-01	7.759599D-01	5.140728D+00
1.071862D-01	1.882991D+01	8.948498D-02		5.224601D+00
AIF	B1F	BETAOF	B180F	A270F
AIR	B1R	BETAOR	B180R	A270R
-5.539804D-02	3.269586D+00	5.154380D+00	5.017258D+00	6.991486D+00
-3.612263D-01	-1.772804D+00	5.542074D+00	4.801744D+00	7.034308D+00
CAPVF	ALPHA	BETAFW	AT1PF	BPTPF
CAPVR	ALPHAR	BETARW	AT1PR	BPTPR
7.619990D+01	-7.361872D+00	9.102498D+01	2.604446D+02	3.270056D+00
7.660381D+01	-9.440776D+00	9.075687D+01	2.626388D+02	1.809231D+00

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMIF	CTFP	A90F
RMIR	CTRP	A90RA
5.568289D-01	9.345529D-02	2.965657D+00
5.627531D-01	9.410231D-02	3.205381D+00

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
4.231247D+00	9.165264D+02	2.027070D+03	2.218858D-02
4.260541D+00	1.010544D+03	2.028070D+03	5.391825D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

CATALOG OF TRIM & STABILITY DERIVATIVE DATA

A-97 TRIM ANALYSIS (CH-46E)

GW = 17,500 lb CG = 20 in. aft

<u>ALTITUDE</u>	<u>AIRSPEED</u>	<u>CLIMB RATE</u>	<u>SIDESLIP</u>	<u>DERIVATIVES</u>
0 ft	-40 kt	0 ft/min	0 deg	X
	-20			
	0			X
	20			
	40			X
	60			
	80			X
	100			
	120			X
	140			
	146			X

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V	RC	GM	RHO	XF LW
FE	ALPHA	ALFF	THEIA	LF LW
-4.000000D+01	0.0	1.750000D+04	2.378000D-03	2.880891D+03
4.400000D+01	1.880125D+02	1.997977D+02	8.079684D+00	7.254980D+03
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	-2.190042D+01	0.0	0.0	1.509366D+01
7.050000D+02	0.0	-2.566568D-01	0.0	1.016448D+04
THEOF	AICF	B1TF	BICF	DFW
THEOR	AICR	B1TR	BICR	LFFW
1.503167D+01	-5.536879D-01	-2.500000D+00	-2.500000D+00	2.957045D+02
1.342252D+01	-6.618723D-01	-2.500000D+00	-2.500000D+00	4.587069D+02
THEIAC	DELIAB	DELIAS	DELIAR	DELTAC
1.422710D+01	1.259119D+00	3.651204D-02	-2.540144D-01	5.602400D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
7.805208D+03	1.140353D+02	-1.029969D+02	6.289863D+02	-6.259929D+02
1.016316D+04	1.645190D+02	-1.526280D+02	6.421039D+02	-7.525902D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.517297D+04	-4.954468D+02	3.052968D+01	1.078802D+02	7.627055D+02
1.077117D+04	-2.288791D+02	2.907438D+03	-1.885536D+02	5.414386D+02
XR	L/DE	SHPTOT	WFF	NMLB
2.554611D+02	-1.497406D+00	1.404144D+03	1.405144D+03	2.846683D-02
SIGOF	CISF	CPSF	AMTF	LAMDAF
SIGOR	CISR	CPSR	AMTR	LAMDAR
5.841923D-02	5.522946D-02	4.218464D-03	6.910822D-01	-5.598734D-02
5.841923D-02	7.161574D-02	2.994654D-03	6.904397D-01	-2.546805D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF	DFR	AOR
9.579409D-02	1.149990D+01	2.229570D-07	1.037832D+00	3.006655D+00
9.581142D-02	1.676079D+01	1.771775D+00	1.037832D+00	3.754714D+00
A1F	B1F	BETAOF	B18OF	A270F
A1R	B1R	BETAOR	B18OR	A270R
-1.020696D+00	1.017067D+00	4.038230D+00	1.954996D+00	4.403075D+00
-1.043351D+00	1.221409D+00	4.748210D+00	2.668276D+00	4.671487D+00
CAPVF	ALPHAF	BETAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
7.309635D+01	-2.249464D+01	1.799654D+02	1.774918D+02	1.440918D+00
6.755760D+01	-1.012491D+00	1.799654D+02	1.799691D+02	1.606369D+00

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMTF	CTFP	A90F
RMTR	CIRP	A90RA
5.705271D-01	5.143516D-02	2.021579D+00
5.684890D-01	7.206246D-02	2.031715D+00

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
0.0	7.627055D+02	1.404144D+03	-2.846683D-02
0.0	5.414386D+02	1.405144D+03	-4.981696D+02

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
5.439174D+02	1.499900D+04	1.092210D+05	1.032000D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-6.729931D-02	1.197114D+00	2.651474D-01	9.291395D-01
-2.106609D-03	1.669811D-01	1.242382D-02	-3.434339D-03
5.421065D-02	-2.141730D-01	-3.104965D-02	8.837794D-02
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
2.863537D-01	-6.626510D+00	-1.179601D+00	-6.277362D+00
6.881242D-03	5.745083D+00	-3.924076D-02	1.121827D-02
-4.898427D-01	8.121438D-01	1.271655D-02	-7.985754D-01
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-7.089010D-03	5.592387D-01	4.590261D-01	-1.113223D-01
1.864217D-04	-1.292977D+00	5.289402D-03	3.039175D-04
-1.639294D-02	-3.143355D-01	-3.108639D-03	-2.672490D-02
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
-7.342905D-04	-1.352982D+00	-9.352099D-02	3.872779D-02
5.599968D-02	3.889070D-01	8.812440D-01	9.129454D-02
3.711154D-03	-8.138381D-02	-1.743012D-01	6.050180D-03
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
4.261297D-04	-7.562409D-01	-7.104212D-02	4.473337D-03
-1.359740D-03	2.693975D-01	3.640342D-01	-2.216742D-03
7.768747D-04	-2.554823D-02	-1.670007D-01	1.266515D-03
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
-3.520273D-04	2.141774D-02	3.651982D-02	-2.442983D-03
-3.118371D-04	-1.441128D-01	1.410526D-02	-5.083784D-04
7.214173D-04	-4.373574D-02	1.235016D-01	1.176104D-03

LONGITUDINAL

	U	MU	M	ALPHA	Q	THETAC
CTF	-0.400D-04	-0.282D-01	0.240D-04	0.390D-04	-0.222D-02	0.223D-01
CTR	-0.268D-04	-0.189D-01	0.789D-04	0.129D-03	0.913D-03	0.427D-01
CHF	0.982D-06	0.692D-03	0.537D-06	0.876D-06	-0.823D-04	-0.193D-03
CHR	0.155D-05	0.109D-02	0.756D-06	0.123D-05	-0.213D-03	-0.219D-03
AIF	-0.513D-03	0.362D+00	0.948D-06	0.155D-05	0.663D-01	0.197D+00
AIR	-0.459D-03	0.324D+00	0.184D-03	0.300D-03	0.765D-01	0.260D+00
VFR	-0.412D-01	-0.291D+02	0.121D+00	0.197D+00	-0.901D+01	0.554D+02
VRR	0.108D+00	0.762D+02	0.379D+00	0.619D+00	0.411D+01	0.160D+03
LF			0.199D+02	0.325D+02		
DF			0.180D+00	0.294D+00		
MF			-0.707D+02	-0.115D+03		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.149D-05	-0.243D-05	-0.869D-04	-0.254D-04	0.336D-02
CYR	0.176D-05	0.287D-05	0.218D-03	-0.711D-05	0.429D-02
BIF	0.659D-03	0.107D-02	0.737D-01	0.171D-01	-0.103D+01
BIR	-0.657D-03	-0.107D-02	-0.736D-01	-0.252D-02	-0.102D+01
YF	0.383D+02	0.624D+02			
LF	0.663D+02	0.108D+03			
NF	-0.138D+02	-0.225D+02			
CTF					-0.200D-03
CTR					0.109D-03

FORCE = 0.241446D+07

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X	BICF	BICR	OMEGAF	OMEGAR
Z	0.189D+02	0.198D+02	0.0	0.0
M	-0.235D+02	-0.974D+01	0.0	0.0
Y	0.151D+01	-0.428D+01	0.0	0.0
L	-0.194D+00	0.228D+00	0.0	0.0
N	-0.990D-01	0.276D-01	0.0	0.0
	0.531D-01	0.423D-01	0.0	0.0
CTF	0.604D-02	-0.314D-02	0.0	0.0
CTR	-0.717D-06	0.594D-02	0.0	0.0
CHF	-0.330D-02	-0.377D-04	0.0	0.0
CHR	0.648D-06	-0.425D-02	0.0	0.0
AIF	0.105D+01	-0.958D-02	0.0	0.0
AIR	-0.204D-03	0.104D+01	0.0	0.0
VFR	0.199D+02	-0.129D+02	0.0	0.0
VRR	0.517D-01	0.223D+02	0.0	0.0
QF	0.232D+01	-0.128D+01	0.0	0.0
QR	-0.310D-03	-0.200D+01	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELR	QFALPHA
	-0.143D-01	0.269D+00	0.778D+00	0.116D+01
	-0.188D-03	-0.582D+00	0.849D-02	-0.306D-03
	0.997D-02	-0.554D+00	0.197D-02	0.163D-01
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELR	QRALPHA
	0.115D-01	0.297D+00	-0.446D+00	0.904D+00
	0.514D-03	-0.244D+00	-0.628D-02	0.837D-03
	-0.256D-01	0.344D+00	0.108D-01	-0.417D-01

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V	RC	GW	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
-2.000000D+01	0.0	1.750000D+04	2.378000D-03	4.584194D+03
4.400000D+01	1.866930D+02	2.233806D+02	6.718622D+00	6.250449D+03
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	-2.190042D+01	0.0	0.0	-3.643666D+02
7.050000D+02	0.0	-2.228830D-01	0.0	1.020254D+04
THEOF	AICF	BITF	BICF	DFW
THEOR	AICR	BITR	BICR	LEFW
1.531319D+01	-7.799877D-02	-2.500000D+00	-2.500000D+00	1.217595D+02
1.441513D+01	-2.874927D-01	-2.500000D+00	-2.500000D+00	4.540756D+02
THETAC	DELTAB	DELTAS	DELIAR	DELTAC
1.486416D+01	7.027024D-01	8.012039D-02	-8.605431D-02	6.096249D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
7.747876D+03	2.310103D+02	-2.506770D+01	1.108482D+03	-1.964160D+02
1.020435D+04	3.096943D+02	-8.179629D+01	1.069687D+03	-4.236670D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.600469D+04	-4.651721D+02	1.107032D+01	4.735515D+01	8.045138D+02
1.412313D+04	-6.800755D+01	1.533718D+03	-1.854486D+02	7.099326D+02
XR	L/DE	SHPTOT	WFF	NMLB
1.063173D+02	-6.630450D-01	1.614446D+03	1.615446D+03	1.238048D-02
SIGOF	CISF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	5.507107D-02	4.449702D-03	6.603635D-01	-6.061106D-02
5.841923D-02	7.253927D-02	3.926581D-03	6.599121D-01	-3.831718D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
4.785570D-02	1.637029D+01	1.201950D-07	1.274724D+00	3.055793D+00
4.791250D-02	2.719517D+01	1.028490D+00		3.870044D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
-1.799944D+00	3.197282D-01	4.865490D+00	1.248002D+00	3.832336D+00
-1.737380D+00	6.871201D-01	5.645144D+00	2.129904D+00	4.309020D+00
CAPVF	ALPHAF	BETAFW	ATIPF	BPIPF
CAPVR	ALPHAR	BETARW	ATIPR	BPIPR
4.2793396D+01	-3.796483D+01	1.799741D+02	1.753930D+02	1.828121D+00
3.377880D+01	3.070028D-01	1.799741D+02	1.779556D+02	1.868321D+00

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMIF	CTFP	A90F	
RMTR	CTRP	A90RA	
6.021214D-01	4.431340D-02	2.696598D+00	
5.999974D-01	7.233230D-02	2.912777D+00	

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	NFF	RP
0.0	8.045138D+02	1.614446D+03	-1.238048D-02
0.0	7.099326D+02	1.615446D+03	-2.166584D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

V	RC	GN	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
0.0	0.0	1.750000D+04	2.378000D-03	7.801588D+03
4.400000D+01	0.0	2.700000D+02	5.628770D+00	3.537988D+02
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	-2.190042D+01	0.0	0.0	1.034454D+04
7.050000D+02	0.0	-1.257153D-01	0.0	4.690701D+02
THEOF	AICF	B1IF	B1CF	DFW
THEOR	AICR	B1TR	B1CR	FFW
1.378817D+01	1.306348D+00	-2.500000D+00	-2.500000D+00	-3.022563D-14
1.543089D+01	7.888940D-01	-2.500000D+00	-2.500000D+00	-6.603018D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.460953D+01	-1.285379D+00	1.718001D-01	4.197298D-01	5.898860D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
7.801588D+03	3.537988D+02	1.743294D+02	1.581702D+03	7.687610D+02
1.034454D+04	4.690701D+02	1.348653D+02	1.584988D+03	4.484434D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.236818D+04	-6.603018D+02	-1.476195D-14	-7.469704D-14	6.217162D+02
1.761831D+04	-3.022563D-14	-6.603018D+02	4.114649D-13	8.856264D+02
XR	L/DE	SHPTOT	WFF	NMLB
1.733795D+03	0.0	1.607343D+03	1.608343D+03	0.0
SIGOF	CISF	CPSF	AMTF	LAMDAF
SIGOR	CISR	CPSR	AMTR	LAMDAR
5.841923D-02	5.541274D-02	3.438663D-03	6.327714D-01	-4.376034D-02
5.841923D-02	7.341213D-02	4.898330D-03	6.324918D-01	-5.197989D-02
MUF	VF	DFFR	DF	A0F
MUR	VR	DFRF	A0R	A0R
4.194738D-19	2.915526D+01	1.406733D-01	1.299000D+00	2.960580D+00
1.014541D-18	3.254405D+01	5.209670D-02		4.056661D+00
A1F	B1F	BETA0F	B180F	A270F
A1R	B1R	BETA0R	B180R	A270R
2.568999D+00	1.248301D+00	4.348611D-01	5.536166D+00	2.839796D+00
2.574339D+00	7.281369D-01	1.513381D+00	6.636064D+00	4.008323D+00
CAPVF	ALPHAF	BETAFW	AT1PF	BPTPF
CAPVR	ALPHAR	BETARW	AT1PR	BPTPR
1.695758D+00	2.700000D+02	0.0	-6.931001D+00	2.856223D+00
4.101367D+00	2.700000D+02	0.0	-4.425661D+00	2.675333D+00

CASE 2

PAGE 4

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMIF	CTFP	A90F	
RMTR	CTRP	A90RA	
6.289577D-01	2.508305D-03	2.782953D+00	
6.284868D-01	3.325536D-03	3.941413D+00	

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
0.0	6.217162D+02	1.607343D+03	0.0
0.0	8.856264D+02	1.608343D+03	0.0

AD-A134 323

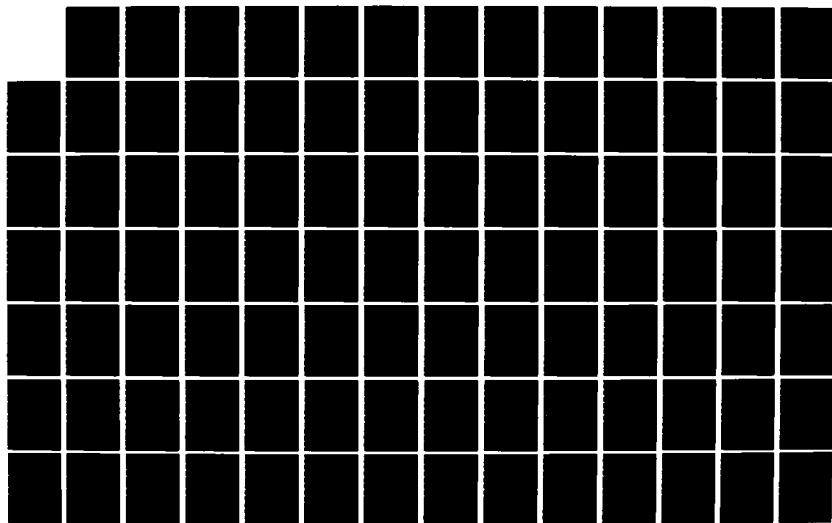
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VOLUME 4(U) BOEING VERTOL CO PHILADELPHIA PA 03 OCT 83
NADC-81118-60-VOL-4

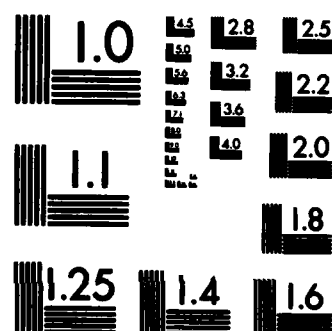
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UNCLASSIFIED

F/G 1/2

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MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

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CASE 2

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
5.439174D+02	1.499900D+04	1.092210D+05	1.032000D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-2.021011D-02	-3.610433D+00	7.33307D-02	7.746122D-01
-2.315375D-04	8.564049D-01	3.925218D-03	-7.370068D-04
-1.121616D-01	-6.525104D-02	-3.127416D-02	3.570214D-01
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
1.224011D-02	4.451367D+01	1.529480D-01	-7.605660D+00
1.068103D-03	7.977778D-01	-3.742574D-03	3.399877D-03
-1.323790D+00	-2.450505D-01	8.171601D-03	-4.213754D+00
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-9.686288D-04	3.758217D+00	3.306955D-01	7.878240D-02
-1.153540D-03	-5.979123D-01	-3.006249D-04	-3.671831D-03
-7.430513D-02	-2.287806D-01	3.300827D-03	-2.365206D-01
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
-7.415758D-04	-1.933836D-02	7.073367D-02	3.772779D-02
-2.908590D-01	1.597938D-01	8.950699D-01	-9.258329D-01
-1.155768D-02	-1.812838D-01	-2.081818D-01	-3.678923D-02
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
-3.460281D-04	-4.748266D-01	-2.194434D-02	-1.341424D-03
-2.840438D-03	1.880527D-01	3.699475D-01	9.041394D-03
-2.298579D-04	-4.914990D-02	-1.792157D-01	-7.316603D-04
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
5.668288D-05	1.457897D-01	4.341800D-02	-4.246771D-06
-1.491721D-03	-1.606447D-01	1.224344D-02	-4.748294D-03
-3.799972D-03	-4.425430D-02	1.254935D-01	-1.209569D-02

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	-0.343D-05	-0.242D-02	0.340D-04	0.108D-03	-0.774D-03	0.393D-01
CTR	-0.128D-05	-0.903D-03	0.278D-03	0.886D-03	0.594D-03	0.400D-01
CHR	0.114D-05	0.807D-03	0.174D-05	0.554D-05	-0.135D-03	0.181D-02
CHF	0.199D-05	0.140D-02	0.126D-04	0.402D-04	-0.116D-03	0.185D-02
AIF	0.908D-02	0.640D+01	0.909D-02	0.289D-01	-0.725D-01	0.511D-02
AIR	0.906D-02	0.639D+01	0.910D-02	0.290D-01	-0.752D-01	0.501D-02
VFR	-0.948D-01	-0.668D+02	0.559D+00	0.178D-01	-0.124D+02	0.184D+03
VRR	-0.539D-01	-0.380D+02	0.272D+01	0.866D+01	0.900D+01	0.149D+03
LF			-0.323D+02	-0.103D+03		
DF			-0.148D-14	-0.470D-14		
MF			-0.323D+02	-0.103D+03		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.137D-05	-0.436D-05	-0.907D-04	-0.465D-04	0.334D-02
CYR	0.202D-05	0.643D-05	-0.864D-04	-0.570D-05	0.444D-02
BIF	0.908D-02	0.289D-01	-0.710D-01	-0.160D-01	0.103D+01
BIR	-0.907D-02	-0.289D-01	0.755D-01	0.840D-03	0.103D+01
YF	-0.150D+03	-0.478D+03			
LF	0.135D+03	0.430D+03			
NF	-0.150D+03	-0.478D+03			
CTF					0.121D-04
CTR					-0.826D-04

FORCE = 0.241446D+07

CASE 2

X	BICF	BICR	OMEGAF	OMEGAR
Z	0.146D+02	0.196D+02	0.0	0.0
M	0.263D+01	0.252D+01	0.0	0.0
Y	-0.954D+00	-0.110D+01	0.0	0.0
L	0.256D+00	-0.421D+00	0.0	0.0
N	0.113D+00	-0.214D+00	0.0	0.0
	0.199D-01	0.369D-01	0.0	0.0
CTF	-0.379D-04	0.373D-03	0.0	0.0
CTR	-0.422D-05	-0.329D-04	0.0	0.0
CHF	-0.335D-02	0.517D-06	0.0	0.0
CHR	-0.806D-06	-0.445D-02	0.0	0.0
AIF	-0.103D+01	0.220D-03	0.0	0.0
AIR	-0.293D-03	-0.103D+01	0.0	0.0
VFR	-0.303D+00	-0.777D-01	0.0	0.0
VRR	0.140D+00	-0.163D+00	0.0	0.0
QF	-0.221D+00	-0.252D-02	0.0	0.0
QR	0.319D-02	-0.239D+00	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELR	QFALPHA
	-0.556D-03	0.705D+00	0.528D+00	0.108D+01
	-0.211D-03	0.121D+01	0.378D-03	-0.670D-03
	0.458D-02	-0.201D+00	0.108D-03	0.146D-01
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELR	QRALPHA
	-0.182D-03	-0.616D+01	-0.740D+00	0.146D+01
	0.412D-03	0.142D+01	0.512D-03	0.131D-02
	0.165D+00	0.431D+00	-0.480D-02	0.525D+00

V	RC	GM	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
2.00000D+01	0.0	1.750000D+04	2.37800D-03	2.412275D+02
4.400000D+01	4.352175D+00	-3.569400D+01	4.406784D+00	7.594563D+03
VTF	CGF	BETAF	PSI	XR LW
VTR	COL	PHI	GAMMA	LR LW
7.050000D+02	-2.190042D+01	0.0	-6.933264D-03	5.173057D+03
7.050000D+02	0.0	-9.312288D-02	0.0	8.818706D+03
THEOF	AICF	B1IF	BICF	DFW
THEOR	AICR	B1TR	B1CR	LFFW
1.275265D+01	2.213348D+00	-2.500000D+00	-2.500000D+00	3.910847D+01
1.602345D+01	1.451460D+00	-2.500000D+00	-2.500000D+00	-3.146936D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.438805D+01	-2.559310D+00	2.544679D-01	7.365209D-01	5.727169D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
7.585534D+03	4.418713D+02	2.988103D+02	1.981993D+03	1.451293D+03
1.020392D+04	6.403245D+02	2.795495D+02	2.192087D+03	1.034271D+03
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
9.784070D+03	-3.108183D+02	9.635795D+00	3.927012D+01	4.918196D+02
1.937251D+04	6.287677D+01	-1.869837D+03	-1.337204D+02	9.738054D+02
XR	L/DE	SHPTOT	WFF	NMLB
7.227609D+01	6.884381D-01	1.565625D+03	1.566625D+03	1.276630D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	5.400696D-02	2.720215D-03	6.630895D-01	-3.425792D-02
5.841923D-02	7.194608D-02	5.386041D-03	6.648476D-01	-6.237306D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
4.771993D-02	2.110955D+01	1.003710D+00	1.264722D+00	2.804336D+00
4.786204D-02	2.120892D+01	1.469905D-04		4.031735D+00
A1F	B1F	BETA0F	B180F	A270F
A1R	B1R	BETA0R	B180R	A270R
3.219767D+00	2.357063D+00	-4.268371D-01	6.015615D+00	3.043873D+00
3.561486D+00	1.679540D+00	4.333080D-01	7.578774D+00	4.961231D+00
CAPVF	ALPHA F	BETAFW	AT1PF	BPTPF
CAPVR	ALPHAR	BETARW	AT1PR	BPTPR
3.377908D+01	-5.153102D+00	3.600000D+02	-1.928058D+00	3.990319D+00
4.069471D+01	-3.398667D+01	3.600000D+02	9.136610D-01	3.937644D+00

CASE 2

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTF	CTFP	A90F	
RMTR	CTRP	A90RA	
5.981628D-01	5.384268D-02	1.891991D+00	
5.973563D-01	6.252140D-02	3.306102D+00	

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHTOT	NMLB
DELHPR	RHPR	WFF	RP
0.0	4.918196D+02	1.565625D+03	1.276630D-02
0.0	9.738054D+02	1.566625D+03	2.234102D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

CASE 3

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V	RC	GW	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
4.000000D+01	0.0	1.750000D+04	2.378000D-03	3.411164D+02
4.400000D+01	2.978253D+00	-9.086354D+00	3.025897D+00	7.453887D+03
VTF	CGF	BETAF	PSI	XR LW
VTR	GGL	PHI	GAMMA	LR LW
7.050000D+02	-2.190042D+01	0.0	-6.290463D-03	2.707131D+03
7.050000D+02	0.0	-1.215772D-01	0.0	9.867202D+03
THEOF	AICF	B1TF	B1CF	DFW
THEOR	AICR	B1TR	B1CR	LFFW
1.197324D+01	1.972777D+00	-2.500000D+00	-2.500000D+00	2.296606D+02
1.524355D+01	1.303634D+00	-2.500000D+00	-2.500000D+00	-1.839083D+02
THEIAC	DELIAB	DELIAS	DELIAR	DELIAC
1.360842D+01	-3.075386D+00	2.231578D-01	6.568964D-01	5.122802D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
7.444395D+03	5.077059D+02	2.624367D+02	2.277784D+03	1.395946D+03
1.020052D+04	7.998113D+02	2.558391D+02	2.668148D+03	1.059392D+03
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
7.859716D+03	-1.717274D+02	3.064025D+01	9.143021D+01	3.950873D+02
1.661850D+04	2.389057D+02	-1.923081D+03	7.081304D+01	8.353682D+02
XR	L/DE	SHPTOT	WFF	NMLB
2.586889D+02	1.655188D+00	1.330456D+03	1.331456D+03	3.004231D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	5.291531D-02	2.185197D-03	6.930470D-01	-2.827694D-02
5.841923D-02	7.245275D-02	4.620356D-03	6.952054D-01	-5.583485D-02
MUF	VF	DFFR	DF	A0F
MUR	VR	DFRF		A0R
9.520627D-02	1.226077D+01	1.595152D+00	1.046856D+00	2.663318D+00
9.559041D-02	1.505907D+01	2.713862D-41		4.002334D+00
AIF	B1F	BETA0F	B180F	A270F
AIR	B1R	BETA0R	B180R	A270R
3.700909D+00	2.267126D+00	-1.061775D+00	6.336097D+00	3.244188D+00
4.336290D+00	1.720345D+00	-3.642117D-01	8.297377D+00	5.488982D+00
CAPVF	ALPHA F	BETA F W	ATIPF	BPIPF
CAPVR	ALPHA R	BETA R W	ATIPR	BPIPR
6.755760D+01	-6.521747D+00	3.600000D+02	-2.820838D+00	4.340113D+00
7.163709D+01	-1.982530D+01	3.600000D+02	3.145433D-01	4.665083D+00

CASE 3

PAGE 4

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTF	CTFP	A90F	
RMTF	CTRP	A90RA	
5.687133D-01	5.284534D-02	1.210328D+00	
5.673381D-01	6.995486D-02	2.506946D+00	

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
1.897078D+00	3.969844D+02	1.334864D+03	2.994317D-02
2.511288D+00	8.378795D+02	1.335864D+03	5.240055D+02

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
5.439174D+02	1.499900D+04	1.092210D+05	1.032000D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-2.011818D-02	6.155997D-01	8.753732D-02	3.940467D-01
-1.560935D-04	1.065172D+00	2.883691D-03	-1.054986D-02
4.307410D-02	-5.032311D-02	-3.004122D-02	2.911239D+00
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
-1.427148D-01	-6.331162D+00	1.017117D+00	-6.758644D+00
5.840777D-03	-1.119131D+00	-1.201983D-02	3.947591D-01
-6.651748D-01	-8.536315D-01	1.664685D-02	-4.495701D+01
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-4.966980D-03	-3.898494D-01	4.174969D-01	2.242099D-01
-1.834457D-03	-1.263261D+00	-2.047161D-03	-1.239850D-01
1.858656D-02	-2.531936D-01	1.338735D-03	1.256205D+00
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
-8.749256D-04	-1.540195D+00	1.626134D-01	8.340320D-02
-7.302748D-02	-1.056330D-01	8.665713D-01	-4.935690D+00
6.424552D-03	-2.350318D-01	-2.264606D-01	4.342146D-01
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
-1.009792D-03	-8.276141D-01	1.939171D-02	1.528989D-02
-8.793365D-03	7.856929D-02	3.638563D-01	-5.943150D-01
1.167606D-03	-6.638340D-02	-1.810249D-01	7.891469D-02
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
3.846322D-04	3.870651D-02	3.457560D-02	6.817189D-04
-6.174667D-04	-1.533110D-01	1.018226D-02	-4.173257D-02
1.053461D-03	-3.541053D-02	1.212591D-01	7.119999D-02

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	0.532D-05	0.375D-02	0.846D-04	0.572D-02	0.147D-02	0.428D-01
CTR	0.255D-04	0.180D-01	0.581D-04	0.393D-02	0.176D-02	0.260D-01
CHF	0.140D-05	0.988D-03	0.625D-05	0.423D-03	0.261D-03	0.353D-02
CHR	0.417D-05	0.294D-02	0.506D-05	0.342D-03	0.109D-04	0.286D-02
ALF	0.290D-03	0.204D+00	0.276D-03	0.186D-01	0.753D-01	0.261D+00
AIR	0.514D-03	0.362D+00	0.205D-03	0.139D-01	0.699D-01	0.224D+00
VFR	-0.144D+00	0.102D+03	0.340D+00	0.230D+02	0.638D+01	0.162D+03
VRR	-0.602D-01	0.425D+02	0.231D+00	0.156D+02	0.761D+01	0.641D+02
LF			0.171D+02	0.115D+04		
DF			0.373D+00	0.252D+02		
MF			0.114D+03	0.773D+04		

LATERAL-DIRECTIONAL

	V	BETA	P	R	ALC
CYF	-0.116D-05	0.781D-04	0.146D-03	0.508D-04	0.317D-02
CYR	0.210D-05	0.142D-03	0.202D-03	0.217D-05	0.437D-02
BIF	0.671D-03	0.454D-01	0.698D-01	0.140D-01	0.103D+01
BIR	-0.669D-03	0.452D-01	0.779D-01	0.328D-03	0.103D+01
YF	-0.319D+02	0.215D+04			
LF	-0.422D+02	0.285D+04			
NF	-0.757D+02	0.512D+04			
CTF					-0.633D-04
CTR					-0.485D-04

FORCE = 0.241446D+07

X	BICF	BICR	OMEGAF	OMEGAR
Z	0.119D+02	0.182D+02	0.0	0.0
M	0.166D+02	0.292D+02	0.0	0.0
Y	-0.413D+01	0.810D+00	0.0	0.0
L	-0.102D+01	0.395D+00	0.0	0.0
V	-0.289D+00	0.130D+00	0.0	0.0
	-0.143D-01	-0.155D-01	0.0	0.0
CTF	-0.585D-02	0.120D-05	0.0	0.0
CTF	0.255D-02	-0.614D-02	0.0	0.0
CH	-0.359D-02	-0.456D-06	0.0	0.0
CHR	-0.213D-03	-0.490D-02	0.0	0.0
AIF	-0.104D+01	-0.207D-03	0.0	0.0
AIR	0.673D-02	-0.105D+01	0.0	0.0
VRR	-0.221D+02	0.417D-01	0.0	0.0
QF	0.111D+02	-0.199D+02	0.0	0.0
QR	0.149D+01	0.395D-02	0.0	0.0
	0.184D+00	-0.350D+00	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELX	QFALPHA
	-0.264D-02	0.947D+00	0.322D+00	0.653D+00
	0.592D-03	0.257D+01	-0.419D-02	0.400D-01
	-0.206D-01	-0.586D-02	-0.670D-02	-0.139D+01
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELX	QRALPHA
	-0.152D-02	-0.551D+00	-0.675D+00	0.130D+01
	0.304D-03	0.268D+01	0.834D-02	0.206D-01
	0.540D-02	0.373D+00	-0.107D-01	0.365D+00

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CASE 3

V	RC	GW	RH0	XF LW
FE	ALPHA	ALFF	THETA	LF LW
6.000000D+01	0.0	1.750000D+04	2.378000D-03	4.834855D+02
4.400000D+01	1.239247D+00	-4.020867D+00	1.321880D+00	7.361838D+03
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	-2.190042D+01	0.0	-4.493559D-03	1.420209D+03
7.050000D+02	0.0	-2.112882D-01	0.0	1.015694D+04
THEOF	AICF	B1TF	BICF	DFW
THEOR	AICR	B1TR	BICR	LFFW
1.200349D+01	1.209180D+00	-2.500000D+00	-2.500000D+00	5.387784D+02
1.439353D+01	7.084282D-01	-2.500000D+00	-2.500000D+00	-1.160693D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.319851D+01	-3.231641D+00	1.701735D-01	3.878534D-01	4.805048D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
7.354922D+03	5.792677D+02	1.628894D+02	2.591726D+03	1.024161D+03
1.021403D+04	9.241483D+02	1.555341D+02	3.075363D+03	8.479356D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
7.808832D+03	-1.043899D+02	5.823702D+01	1.686259D+02	3.925295D+02
1.342911D+04	5.411626D+02	-2.389278D+03	2.875536D+02	6.750463D+02
XR	L/DE	SHPTOT	WFF	NMLB
5.892356D+02	3.044673D+00	1.167576D+03	1.168576D+03	5.134455D-02
SIGOF	CISF	CPSF	AMTF	LAMDAF
SIGOR	CISR	CPSR	AMTR	LAMDAR
5.841923D-02	5.200283D-02	2.171050D-03	7.232041D-01	-3.234340D-02
5.841923D-02	7.226792D-02	3.733628D-03	7.250908D-01	-4.903543D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
1.422482D-01	8.242049D+00	1.619295D+00	9.654407D-01	2.594813D+00
1.430136D-01	1.105107D+01	6.105915D-41		3.888216D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
4.211860D+00	1.663118D+00	-1.677575D+00	6.742717D+00	3.728414D+00
4.999670D+00	1.376887D+00	-1.197737D+00	8.794661D+00	5.932301D+00
CAPVF	ALPHAF	BETAFW	AT1FF	BT1FF
CAPVR	ALPHAR	BETARW	AT1PR	BT1PR
1.013364D+02	-8.260753D+00	3.600000D+02	-4.048893D+00	4.528325D+00
1.035311D+02	-1.312981D+01	3.600000D+02	-7.610831D-01	5.185800D+00

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CASE 3

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTF	CTFP	A90F	
RMTB	CTRP	A90RA	
5.397687D-01	5.219275D-02	8.164721D-01	
5.382554D-01	7.200901D-02	1.719235D+00	

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
5.522782D+00	3.980523D+02	1.180718D+03	5.077353D-02
7.619643D+00	6.826659D+02	1.181718D+03	8.885367D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

V	RC	GM	RHO	XF LW
FE	ALPHA	ALFF	THEIA	LF LW
8.000000D+01	0.0	1.750000D+04	2.378000D-03	6.642271D+02
4.400000D+01	7.992911D-01	-2.107589D+00	8.663809D-01	7.445945D+03
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	-2.190042D+01	0.0	-4.055956D-03	1.089602D+03
7.050000D+02	0.0	-3.030591D-01	0.0	1.003277D+04
THEOF	AICF	B1TF	BICF	DFW
THEOR	AICR	B1TR	BICR	LFFW
1.267135D+01	6.435831D-01	-8.000000D-01	-8.000000D-01	9.594786D+02
1.436105D+01	2.661144D-01	-8.000000D-01	-8.000000D-01	-3.176136D+01
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.351620D+01	-3.262674D+00	1.153725D-01	1.783562D-01	5.051321D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
7.460737D+03	4.697877D+02	1.024734D+02	1.953726D+03	7.777717D+02
1.006347D+04	7.551582D+02	9.290595D+01	2.472219D+03	7.502639D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
9.086691D+03	-1.837373D+01	8.674495D+01	2.731609D+02	4.567642D+02
1.283612D+04	9.598283D+02	-3.045916D+03	4.871538D+02	6.452382D+02
XR	L/DE	SHPTOT	WFF	NMLB
1.000459D+03	4.495926D+00	1.202002D+03	1.203002D+03	6.650028D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAR
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	5.296427D-02	2.526326D-03	7.520561D-01	-3.796511D-02
5.841923D-02	7.194812D-02	3.568762D-03	7.535049D-01	-4.717202D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF	DF	AOR
1.894472D-01	6.326065D+00	1.624482D+00	9.321523D-01	2.661680D+00
1.905315D-01	8.385519D+00	2.715172D-41		3.805148D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
3.173799D+00	1.262935D+00	-6.380400D-01	5.713986D+00	4.620254D+00
4.017320D+00	1.218261D+00	-3.914024D-01	7.654428D+00	6.693038D+00
CAPVF	ALPHA	BETAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
1.351152D+02	-8.700709D+00	3.600000D+02	-5.526910D+00	3.415846D+00
1.366078D+02	-1.048968D+01	3.600000D+02	-2.183389D+00	4.197979D+00

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMIF	CTFP	A90F	
RMIR	CIRP	A90RA	
5.097325D-01	5.278904D-02	6.115976D-01	
5.081384D-01	7.112868D-02	1.178126D+00	

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
1.192187D+01	4.686860D+02	1.229988D+03	6.498845D-02
1.606370D+01	6.613019D+02	1.230988D+03	1.137298D+03

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
5.439174D+02	1.499900D+04	1.092210D+05	1.032000D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-4.039941D-02	4.235466D-01	1.527202D-01	4.191892D-01
-3.165789D-04	1.018672D+00	1.168294D-03	-4.278925D-02
5.414576D-02	-6.523918D-02	-3.639355D-02	7.318417D+00
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
-1.937621D-02	-1.823326D+00	8.453611D-01	-8.636565D+00
5.929322D-03	-8.194065D-01	-8.891582D-03	8.014156D-01
-8.369888D-01	-8.137804D-01	5.987975D-02	-1.131286D+02
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-5.389464D-03	5.590718D-02	4.824412D-01	2.597357D-01
-5.856997D-04	-1.429281D+00	-3.299070D-03	-7.916400D-02
2.252434D-02	-2.516046D-01	-9.128049D-04	3.044421D+00
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
7.526283D-04	-1.427207D+00	8.986743D-02	4.457466D-02
-1.186102D-01	7.301713D-02	8.634757D-01	-1.603152D+01
-1.034244D-03	-1.783471D-01	-2.144109D-01	-1.397898D-01
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
-5.778882D-04	-7.501010D-01	1.415816D-02	5.043266D-03
-8.308814D-03	9.841517D-02	3.620502D-01	-1.123031D+00
-6.939037D-05	-4.890451D-02	-1.768346D-01	-9.378900D-03
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
3.212392D-04	1.174326D-02	2.575257D-02	1.862617D-03
-3.235287D-03	-1.408190D-01	1.079284D-02	-4.372860D-01
8.817027D-04	-3.682990D-02	1.210612D-01	1.191722D-01

LONGITUDINAL

	U	MU	M	ALPHA	Q	THETAC
CTF	-0.705D-05	-0.497D-02	0.102D-03	0.138D-01	-0.173D-02	0.524D-01
CTR	0.972D-05	0.685D-02	0.733D-04	0.990D-02	0.195D-02	0.350D-01
CHF	0.597D-06	0.421D-03	0.723D-05	0.978D-03	0.259D-03	0.450D-02
CHR	0.270D-05	0.190D-02	0.679D-05	0.918D-03	0.220D-04	0.429D-02
AIF	0.245D-03	0.172D+00	0.619D-03	0.836D-01	-0.813D-01	0.567D+00
AIR	0.444D-03	0.313D+00	0.464D-03	0.628D-01	-0.630D-01	0.477D+00
VFR	-0.601D-01	-0.624D+02	0.209D+00	0.282D+02	-0.365D+01	0.106D+03
VRR	-0.385D-01	-0.272D+02	0.148D+00	0.200D+02	0.415D+01	0.670D+02
LF			0.314D+02	0.425D+04		
DF			-0.664D+00	-0.897D+02		
MF			0.232D+03	0.313D+05		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.114D-05	-0.155D-03	-0.126D-03	-0.431D-04	0.319D-02
CYR	0.188D-05	0.255D-03	0.196D-03	-0.277D-05	0.432D-02
BIF	0.104D-03	0.141D-01	-0.672D-01	-0.141D-01	0.103D+01
BIR	-0.105D-03	-0.142D-01	0.733D-01	0.219D-04	0.103D+01
YF	-0.572D+02	-0.773D+04			
LF	-0.408D+02	-0.552D+04			
NF	-0.339D+03	-0.459D+05			
CIF					-0.242D-03
CTR					-0.104D-03

FORCE = 0.241446D+07

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CASE 4

X	BICF	BICR	OMEGAF	OMEGAR
Z	0.867D+01	0.171D+02	0.0	0.0
M	0.428D+02	0.629D+02	0.0	0.0
Y	0.807D+01	0.317D+01	0.0	0.0
L	0.993D+00	0.314D+00	0.0	0.0
N	0.474D+00	0.322D+00	0.0	0.0
	0.490D-01	-0.134D+00	0.0	0.0
CTF	-0.138D-01	-0.808D-07	0.0	0.0
CTR	0.453D-02	-0.138D-01	0.0	0.0
CHF	-0.414D-02	-0.421D-07	0.0	0.0
CHR	0.408D-03	-0.556D-02	0.0	0.0
AIF	-0.110D+01	-0.160D-04	0.0	0.0
AIR	0.256D-01	-0.111D+01	0.0	0.0
VFR	-0.280D+02	0.434D-02	0.0	0.0
VRR	0.966D+01	-0.273D+02	0.0	0.0
QF	0.246D+01	0.385D-03	0.0	0.0
QR	-0.110D+01	0.336D+01	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELPH	QFALPHA
	-0.826D-03	0.271D+00	0.328D+00	0.669D+00
	0.183D-03	0.253D+01	-0.703D-02	0.247D-01
	-0.183D-01	-0.169D+00	-0.104D-01	-0.247D+01
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELPH	QRALPHA
	-0.724D-02	-0.137D+00	-0.417D+00	0.103D+01
	-0.875D-04	0.248D+01	0.876D-02	-0.118D-01
	-0.173D-01	0.315D+00	-0.178D-01	-0.233D+01

CASE 4

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V	RC	GW	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
1.000000D+02	0.0	1.750000D+04	2.378000D-03	9.03326D+02
4.400000D+01	4.984391D-01	-1.343050D+00	5.919056D-01	7.600931D+03
VTF	CGF	BEIAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	-2.190042D+01	0.0	-3.189551D-03	1.135574D+03
7.050000D+02	0.0	-4.090389D-01	0.0	9.793511D+03
THEOF	AICF	BITF	BICF	DFW
THEOR	AICR	BITR	BICR	LEFW
1.385571D+01	11.290907D-01	1.600000D+00	1.600000D+00	1.498122D+03
1.487169D+01	-1.008802D-01	1.600000D+00	1.600000D+00	6.165566D+01
THEIAC	DELTAB	DELTAS	DELTAR	DELTAC
1.436370D+01	-3.126749D+00	8.644115D-02	1.219775D-02	5.708295D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
7.648655D+03	2.970448D+02	5.679946D+01	1.033635D+03	6.675167D+02
9.848098D+03	4.662158D+02	4.787063D+01	1.463876D+03	6.752274D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.146340D+04	7.468593D+01	1.289461D+02	3.957159D+02	5.762349D+02
1.395838D+04	1.497529D+03	-3.991790D+03	7.707157D+02	7.016511D+02
XR	L/DE	SHPTOI	WFF	NMLB
1.555218D+03	5.968946D+00	1.377886D+03	1.378886D+03	7.252231D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	ANTR	LAMDAR
5.841923D-02	5.457207D-02	3.187110D-03	7.807684D-01	-4.485909D-02
5.841923D-02	6.959641D-02	3.880777D-03	7.818326D-01	-4.849423D-02
MUF	VF	DFFR	DFF	AOF
MUR	VR	DFRF		AOR
2.366155D-01	5.200253D+00	1.620895D+00	9.173656D-01	2.794798D+00
2.380253D-01	6.635415D+00	5.362764D-14		3.672892D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
1.678506D+00	1.083881D+00	8.513181D-01	4.234582D+00	5.785759D+00
2.377511D+00	1.096403D+00	9.748302D-01	5.753547D+00	7.440212D+00
CAPVF	ALPHAF	BETAFF	ATIPF	BPTPF
CAPVR	ALPHAR	BETARV	ATIPR	BPTPR
1.688940D+02	-9.001561D+00	3.600000D+02	-7.323055D+00	1.998045D+00
1.700548D+02	-9.324405D+00	3.600000D+02	-4.124050D+00	2.618140D+00

PAGE 4

CASE 4

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMTR	CTFP	A90F
RMTR	CTRP	A90RA
4.799174D-01	5.388782D-02	4.544749D-01
4.781284D-01	6.943242D-02	7.723922D-01

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	NFF	RP

2.332615D+01	5.995611D+02	1.431267D+03	6.981938D-02
3.005486D+01	7.317060D+02	1.432267D+03	1.221839D+03

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

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CASE 3

V	RC	GM	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
1.200000D+02	0.0	1.750000D+04	2.378000D-03	1.112953D+03
4.400000D+01	-8.438381D-01	-2.140866D+00	-7.978454D-01	7.800706D+03
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	-2.190042D+01	0.0	8.685651D-03	1.400886D+03
7.050000D+02	0.0	-6.131073D-01	0.0	9.672389D+03
THEOF	AICF	B1TF	B1CF	DFW
THEOR	AICR	B1TR	B1CR	FFW
1.524467D+01	-3.992169D-03	2.800000D+00	2.800000D+00	2.160170D+03
1.623118D+01	-2.044663D-01	4.000000D+00	4.000000D+00	-1.602458D+01
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.573793D+01	-3.447972D+00	7.873311D-02	-4.141800D-02	6.773588D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
7.873765D+03	3.057897D+02	6.007449D+01	9.969484D+02	7.461523D+02
9.769839D+03	2.604833D+02	6.136953D+01	7.108188D+02	7.976352D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.438768D+04	-4.783613D+01	1.956582D+02	6.162801D+02	7.232308D+02
1.743870D+04	2.159700D+03	-6.900950D+03	1.095937D+03	8.765979D+02
XK	L/DE	SHPTOT	WFF	NMLB
2.188232D+03	7.217536D+00	1.699829D+03	1.700829D+03	7.055384D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	5.603013D-02	4.000133D-03	8.101527D-01	-5.795557D-02
5.841923D-02	6.901961D-02	4.848394D-03	8.106715D-01	-5.684213D-02
MUF	VF	DFFR	DFP	AOF
MUR	VR	DFRF		AOR
2.828070D-01	4.467761D+00	1.545798D+00	9.203958D-01	2.930436D+00
2.847894D-01	5.507944D+00	1.242916D-11		3.690113D+00
A1F	B1F	BETA0F	B180F	A270F
A1R	B1R	BETA0R	B180R	A270R
1.618915D+00	1.211584D+00	8.985382D-01	4.187344D+00	7.180423D+00
1.154203D+00	1.295195D+00	2.043310D+00	4.406729D+00	8.801844D+00
CAPVF	ALPHAF	BETAFW	AT1PF	BPTPF
CAPVR	ALPHAR	BETARW	AT1PR	BPTPR
2.026728D+02	-1.034384D+01	3.946654D-19	3.512751D+02	2.022084D+00
2.037302D+02	-9.768299D+00	3.919182D-19	3.533104D+02	1.734852D+00

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CASE 5

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMIF	CTFP	A90F	
RMIR	CTRP	A90RA	
4.507620D-01	5.530416D-02	3.269590D-01	
4.488577D-01	6.857371D-02	5.471333D-01	

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	NFF	RP
3.912262D+01	7.623535D+02	1.787461D+03	6.709680D-02
4.850961D+01	9.251075D+02	1.788461D+03	1.174194D+03

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
5.439174D+02	1.499900D+04	1.092210D+05	1.032000D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-6.130566D-02	3.329168D-01	8.242921D-02	7.804566D-01
-1.602735D-03	7.564759D-01	1.540863D-03	-3.248651D-01
8.598193D-02	-4.223030D-02	-3.533509D-02	1.742804D+01
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
5.487114D-02	-6.538860D-01	6.605926D-01	-1.031314D+01
9.521802D-03	-1.077894D+00	-9.301977D-03	1.930015D+00
-9.587934D-01	-5.238388D-01	8.789841D-02	-1.943419D+02
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-4.203604D-03	2.678713D-01	5.298456D-01	2.457291D-01
5.030285D-04	-1.455718D+00	-5.481221D-03	1.019610D-01
2.161578D-02	-2.781612D-01	1.326759D-03	4.381394D+00
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
2.192748D-03	-7.470984D-01	8.351866D-02	4.111834D-02
-1.708778D-01	7.321704D-03	8.783391D-01	-3.463596D+01
-4.956137D-03	-1.859321D-01	-1.449369D-01	-1.004580D+00
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
-8.125598D-05	-5.373777D-01	3.972434D-03	-6.217817D-03
-1.037390D-02	9.066496D-02	3.634532D-01	-2.102729D+00
-1.402440D-03	-5.124111D-02	-1.595994D-01	-2.842665D-01
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
1.429895D-04	8.741320D-03	4.266351D-02	8.393050D-03
-5.304983D-03	-1.622288D-01	1.430858D-02	-1.075290D+00
1.247458D-03	-5.277557D-02	1.237594D-01	2.528526D-01

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
GTF	-0.126D-04	-0.890D-02	0.109D-03	0.222D-01	-0.176D-02	0.594D-01
CTR	-0.172D-05	-0.121D-02	0.871D-04	0.176D-01	0.203D-02	0.454D-01
CHF	0.867D-06	0.611D-03	0.545D-05	0.111D-02	-0.173D-03	0.407D-02
CHR	0.188D-05	0.133D-02	0.437D-05	0.886D-03	0.435D-04	0.351D-02
ALF	0.256D-03	0.181D+00	0.998D-03	0.202D+00	-0.896D-01	0.893D+00
ALR	0.413D-03	0.291D+00	0.817D-03	0.166D+00	-0.589D-01	0.784D+00
VFR	-0.394D-01	-0.278D+02	0.150D+00	0.304D+02	-0.245D+01	0.808D+02
VRR	-0.286D-01	-0.202D+02	0.119D+00	0.240D+02	0.280D+01	0.607D+02
LF			0.489D+02	0.991D+04		
DF			-0.102D+01	-0.206D+03		
MF			0.360D+03	0.730D+05		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.149D-05	-0.301D-03	0.565D-04	-0.434D-04	0.342D-02
CYR	0.193D-05	0.390D-03	0.112D-03	-0.145D-05	0.418D-02
B1F	-0.253D-03	-0.513D-01	-0.640D-01	-0.175D-01	0.103D+01
B1R	0.299D-03	0.605D-01	0.693D-01	0.348D-02	0.103D+01
YF	-0.847D+02	-0.172D+05			
LF	-0.642D+02	-0.130D+05			
NF	-0.538D+03	-0.109D+06			
CTR					
					-0.229D-03
					-0.264D-03

FORCE = 0.241446D+07

X	BICF	BICR	OMEGAF	OMEGAR
Z	0.494D+01	0.102D+02	0.0	0.0
M	0.766D+02	0.989D+02	0.0	0.0
Y	-0.117D+02	0.597D+01	0.0	0.0
L	-0.111D+01	0.123D+00	0.0	0.0
N	-0.391D+00	0.182D+00	0.0	0.0
	-0.244D+00	0.174D+00	0.0	0.0
CTF	-0.222D-01	0.360D-06	0.0	0.0
CTR	0.509D-02	-0.222D-01	0.0	0.0
CHF	-0.445D-02	0.330D-07	0.0	0.0
CHR	0.243D-03	-0.502D-02	0.0	0.0
AIF	-0.122D+01	0.100D-04	0.0	0.0
AIR	0.447D-01	-0.122D+01	0.0	0.0
VFR	-0.302D+02	-0.443D-02	0.0	0.0
VRR	0.712D+01	-0.300D+02	0.0	0.0
QF	-0.778D+01	-0.594D-04	0.0	0.0
QR	0.415D+00	-0.574D+01	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFM	QFR	QFDELR	QFALPHA
	-0.616D-02	0.162D+00	0.585D+00	0.120D+01
	0.916D-04	0.124D+01	-0.121D-01	0.186D-01
	0.196D-01	-0.430D+00	-0.177D-01	0.396D+01
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELR	QRALPHA
	-0.677D-02	-0.646D-03	-0.681D+00	0.133D+01
	-0.177D-03	0.184D+01	0.162D-01	-0.359D-01
	0.669D-02	0.546D+00	-0.289D-01	0.136D+01

CASE 5

PAGE 3

V	RC	GW	RHO	XF	LW
FE	ALPHA	ALFF	THETA	LF	LW
1.400000D+02	0.0	1.750000D+04	2.378000D-03	1.510007D+03	
4.400000D+01	-4.771221D+00	-5.806163D+00	-4.719358D+00	8.242134D+03	
VTF	CGF	BETAF	PSI	XR	LW
VTR	CGL	PHI	GAMMA	LR	LW
7.050000D+02	-2.190042D+01	0.0	8.682697D-02	1.750724D+03	
7.050000D+02	0.0	-1.078736D+00	0.0	1.004020D+04	
THEOF	AICF	B1TF	B1CF	DFW	
THEOR	AICR	B1TR	B1CR	LFFW	
1.750838D+01	-2.156472D-01	2.800000D+00	2.800000D+00	3.007278D+03	
1.821566D+01	-2.888377D-01	4.000000D+00	4.000000D+00	-8.240659D+02	
THETAC	DELTAB	DELTAS	DELTAR	DELTAC	
1.786202D+01	-3.558120D+00	4.083777D-02	-8.873988D-02	8.420173D+00	
TF	HF	YF	MHF	LHF	
TR	HR	YR	MHR	LHR	
8.360014D+03	5.683794D+02	6.366139D+01	2.047580D+03	8.391776D+02	
1.017632D+04	5.595238D+02	7.331848D+01	1.768572D+03	9.809335D+02	
QF	LFZ	YFY	LF	RHPF	
QR	DFX	MF	NF	RHPR	
1.997480D+04	-1.071368D+03	3.485681D+02	9.852589D+02	1.004081D+03	
2.358386D+04	2.928314D+03	-1.648144D+04	1.461579D+03	1.185499D+03	
XR	L/DE	SHPTOT	WFF	NMLB	
3.038264D+03	7.650511D+00	2.289579D+03	2.290579D+03	6.111991D-02	
SIGOF	CISF	CPSF	AMTF	LAMDAF	
SIGOR	CISR	CPSR	AMTR	LAMDAR	
5.841923D-02	5.945271D-02	5.553491D-03	8.394945D-01	-8.846342D-02	
5.841923D-02	7.250157D-02	6.556899D-03	8.403180D-01	-8.302350D-02	
MUF	VF	DFFR	DFF	A0F	
MUR	VR	DFRF		A0R	
3.250420D-01	4.078487D+00	1.316047D+00	9.533944D-01	3.233767D+00	
3.283390D-01	4.926921D+00	6.435362D-11		3.986693D+00	
AIF	BIF	BETA0F	B180F	A270F	
AIR	BIR	BETA0R	B180R	A270R	
3.326431D+00	1.362663D+00	-7.199627D-01	6.025061D+00	9.219130D+00	
2.872755D+00	1.592903D+00	3.744364D-01	6.229572D+00	1.091623D+01	
CAPVF	ALPHAF	BETAFW	ATIPF	BPTPF	
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR	
2.364516D+02	-1.427122D+01	3.204915D-18	3.490552D+02	3.594718D+00	
2.376047D+02	-1.303841D+01	3.172733D-18	3.511015D+02	3.284822D+00	

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CASE 5

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTR	CTFP	A90F	
4.236124D-01	CTRP	A90RA	
4.204513D-01	5.843372D-02	2.786455D-01	
	7.118135D-02	4.251742D-01	

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
5.768695D+01	1.061768D+03	2.417538D+03	5.788621D-02
7.027167D+01	1.255770D+03	2.418538D+03	1.013009D+03

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

CASE 6

PAGE 3

V	RC	GW	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
1.460000D+02	0.0	1.750000D+04	2.378000D-03	1.660028D+03
4.400000D+01	-6.109157D+00	-7.094381D+00	-6.046986D+00	8.471808D+03
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	-2.190042D+01	0.0	1.252000D-01	1.897995D+03
7.050000D+02	0.0	-1.217784D+00	0.0	1.021939D+04
THEOF	AICF	B1TF	B1CF	DFW
THEOR	AICR	B1TR	B1CR	IFFW
1.835352D+01	-1.985985D-01	2.800000D+00	2.800000D+00	3.317434D+03
1.898360D+01	-2.301488D-01	4.000000D+00	4.000000D+00	-1.234541D+03
THEIAC	DELIAB	DELTAS	DELTAR	DELTAC
1.866856D+01	-3.591611D+00	3.121198D-02	-6.735494D-02	9.045395D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
8.606034D+03	6.807352D+02	7.928345D+01	2.446330D+03	9.452032D+02
1.037215D+04	6.759043D+02	8.804271D+01	2.160881D+03	1.106694D+03
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
2.35856D+04	-1.580581D+03	3.911002D+02	1.129843D+03	1.123906D+03
2.637310D+04	3.167211D+03	-2.075037D+04	1.374933D+03	1.325707D+03
XR	L/DE	SHPTOT	WFF	NMLB
3.354214D+03	7.502323D+00	2.549613D+03	2.550613D+03	5.724114D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	6.119100D-02	6.216237D-03	8.483527D-01	-9.982734D-02
5.841923D-02	7.400490D-02	7.332378D-03	8.492618D-01	-9.334707D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF	DFR	AOR
3.368668D-01	4.028648D+00	1.257122D+00	9.539420D-01	3.376118D+00
3.406513D-01	4.817922D+00	2.066485D-10		4.113786D+00
A1F	B1F	BETA0F	B180F	A270F
A1R	B1R	BETA0R	B180R	A270R
3.975184D+00	1.534867D+00	-1.312906D+00	6.747357D+00	1.000716D+01
3.510721D+00	1.797184D+00	-2.252967D-01	6.422948D+00	1.170302D+01
CAPVF	ALPHAF	BETA0F	ATIPF	BTIPF
CAPVR	ALPHAR	BETA0R	ATIPR	BTIPR
2.465852D+02	-1.560916D+01	9.674844D-18	3.483660D+02	4.261210D+00
2.477830D+02	-1.424980D+01	9.567359D-18	3.504015D+02	3.943987D+00

PAGE 4

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CASE 6

XP	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMIF	CTFP	A90F	
RMTR	CTRP	A90RA	
4.157853D-01	6.006202D-02	2.785090D-01	
4.121858D-01	7.245176D-02	4.077835D-01	

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
6.381290D+01	1.187719D+03	2.690402D+03	5.424681D-02
7.697638D+01	1.402683D+03	2.691402D+03	9.493193D+02

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
5.439174D+02	1.499900D+04	1.092210D+05	1.032000D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-6.842447D-02	2.332992D-01	6.427181D-02	4.633757D-01
-4.829067D-04	1.077684D-01	3.187139D-03	-1.184312D-01
5.357087D-02	-1.920690D-02	-2.484252D-02	1.313807D+01
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
4.534832D-02	-1.765183D-01	4.647766D-01	-1.148017D+01
1.315720D-02	-1.284929D+00	-1.123079D-02	3.226758D+00
-1.048016D+00	-6.584627D-01	1.180518D-01	-2.570225D+02
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-3.242892D-03	3.538122D-01	5.509584D-01	2.490516D-01
1.073457D-03	-1.396297D+00	-7.000777D-03	2.632616D-01
2.281681D-02	-3.732015D-01	8.345968D-04	5.546695D+00
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
5.157049D-03	-1.506785D-02	4.186082D-02	3.165889D-02
-2.182821D-01	-6.797577D-02	9.627134D-01	-5.353295D+01
1.876336D-03	-1.395961D-01	-1.423465D-01	4.601650D-01
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
5.410483D-04	-3.444470D-01	-4.534572D-02	-1.846312D-02
-1.594053D-02	9.554973D-02	3.865593D-01	-3.909360D+00
-4.359563D-05	4.197866D-03	-1.701493D-01	-1.069168D-02
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
-7.366061D-06	3.101282D-02	8.776192D-02	6.471073D-03
-4.432074D-03	-2.040611D-01	1.669670D-02	-1.086951D+00
7.906916D-04	-9.054282D-02	1.355980D-01	1.939144D-01

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	-0.895D-05	-0.631D-02	0.112D-03	0.275D-01	-0.170D-02	0.634D-01
CTR	-0.122D-05	-0.859D-03	0.953D-04	0.234D-01	0.200D-02	0.530D-01
CHF	0.965D-06	0.680D-03	0.105D-04	0.257D-02	-0.184D-03	0.668D-02
CHR	0.210D-05	0.148D-02	0.742D-05	0.182D-02	0.122D-03	0.575D-02
AlF	0.347D-03	0.244D+00	0.125D-02	0.306D+00	-0.935D-01	0.112D+01
AlR	0.482D-03	0.340D+00	0.108D-02	0.265D+00	-0.565D-01	0.103D+01
VFR	-0.261D-01	-0.184D+02	0.127D+00	0.312D+02	-0.198D+01	0.709D+02
VRR	-0.203D-01	-0.143D+02	0.108D+00	0.265D+02	0.228D+01	0.585D+02
LF			0.686D+02	0.168D+05		
DF			0.780D+00	0.191D+03		
MF			0.470D+03	0.115D+06		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.199D-05	-0.489D-03	0.300D-04	-0.486D-04	0.379D-02
CYR	0.252D-05	0.618D-03	0.334D-04	-0.171D-04	0.454D-02
B1F	-0.213D-03	-0.523D-01	-0.623D-01	-0.180D-01	0.104D+01
B1R	0.302D-03	0.740D-01	0.681D-01	0.381D-03	0.104D+01
YF	-0.108D+03	-0.264D+05			
LF	-0.118D+03	-0.289D+05			
NF	-0.443D+03	-0.109D+06			
CTF					-0.292D-03
CTR					-0.355D-03

FORCE = 0.241446D+07

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CASE 6

X	BICF	BICR	OMEGAF	OMEGAR
Z	0.691D+01	0.137D+02	0.0	0.0
M	0.103D+03	0.121D+03	0.0	0.0
Y	0.138D+02	0.733D+01	0.0	0.0
L	0.685D+00	0.334D+00	0.0	0.0
N	0.421D+00	0.134D+00	0.0	0.0
	0.103D+01	0.823D+00	0.0	0.0
CTF	0.272D-01	0.172D-06	0.0	0.0
CTR	0.428D-02	0.272D-01	0.0	0.0
CHF	0.593D-02	0.292D-07	0.0	0.0
CHR	0.321D-03	0.646D-02	0.0	0.0
AIF	0.132D+01	0.477D-05	0.0	0.0
AIR	0.459D-01	0.133D+01	0.0	0.0
VFR	0.304D+02	0.217D-02	0.0	0.0
VRR	0.498D+01	0.302D+02	0.0	0.0
QF	0.261D+02	0.648D-04	0.0	0.0
QR	0.381D+01	0.259D+02	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELR	QFALPHA
	0.105D-01	0.259D+00	0.106D+01	0.241D+01
	0.248D-03	0.118D+01	-0.900D-02	0.607D-01
	0.796D-01	0.773D+00	-0.142D-01	0.195D+02
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELR	QRALPHA
	0.538D-02	0.149D+00	-0.150D+01	0.243D+01
	0.314D-03	0.312D+01	0.126D-01	-0.771D-01
	0.850D-01	0.115D+01	-0.192D-01	0.208D+02

CATALOG OF TRIM & STABILITY DERIVATIVE DATA

A-97 TRIM ANALYSIS (CH-46E)

GW = 17,500 lb CG = 20 in. aft

<u>ALTITUDE</u>	<u>AIRSPEED</u>	<u>CLIMB RATE</u>	<u>SIDESLIP</u>	<u>DERIVATIVES</u>
14000 ft	0 kt	0 ft/min	0 deg	X
	20			
	40			X
	60			
	80			X
	100			
	112			X

CASE 7

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V	RC	GM	RHO	XF LM
FE	ALPHA	ALFF	THETA	LF LM
0.0	0.0	1.750000D+04	1.546598D-03	7.793554D+03
4.400000D+01	0.0	2.700000D+02	5.569048D+00	3.589794D+02
VTF	CGF	BETAF	PSI	XR LM
VTR	CGL	PHI	GAMMA	LR LM
7.050000D+02	-2.190042D+01	0.0	0.0	1.035165D+04
7.050000D+02	0.0	-1.340876D-01	0.0	4.824497D+02
THEOF	AICF	B1IF	BICF	DFW
THEOR	AICR	B1IR	B1CR	LFWM
1.614422D+01	2.024408D+00	-2.500000D+00	-2.500000D+00	-3.022248D-14
1.846794D+01	1.274538D+00	-2.500000D+00	-2.500000D+00	-6.602328D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.730608D+01	-1.818247D+00	2.488471D-01	6.620521D-01	7.989210D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
7.793554D+03	3.589794D+02	2.747941D+02	1.610226D+03	1.208468D+03
1.035165D+04	4.824497D+02	2.326236D+02	1.658497D+03	7.743619D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.421591D+04	-6.602328D+02	-1.476041D-14	-7.468925D-14	7.145965D+02
2.279068D+04	-3.022248D-14	-6.602328D+02	4.114220D-13	1.145628D+03
XR	L/DE	SHPTOT	WFF	NMLB
1.714946D+03	0.0	1.960224D+03	1.961224D+03	0.0
SIGOF	CTSF	CPSF	AMIF	LAMDAF
SIGOR	CTSR	CPSR	AMIR	LAMDAR
5.841923D-02	8.521390D-02	6.077051D-03	6.665492D-01	-5.423534D-02
5.841923D-02	1.130326D-01	9.742615D-03	6.667035D-01	-6.447287D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF	AOR	AOR
5.203420D-19	3.613236D+01	1.406733D-01	1.299000D+00	3.039884D+00
1.257330D-18	4.037002E+01	5.209670D-02		4.117551D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
2.615359D+00	1.962519D+00	4.623940D-01	5.660871D+00	4.645953D+00
2.693819D+00	1.257397D+00	1.398818D+00	6.813307D+00	6.408020D+00
CAPVF	ALPHAF	BETAFW	AT1PF	BPTPF
CAPVR	ALPHAR	BETARW	AT1PR	BPTPR
2.103526D+00	2.700000D+02	0.0	-6.884641D+00	3.269799D+00
5.082860D+00	2.700000D+02	0.0	-4.306181D+00	2.972828D+00

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMIF	CTFP	A90F	
RMIR	CTRP	A90RA	
6.609744D-01	3.913163D-03	4.505184D+00	
6.606904D-01	5.259089D-03	6.124002D+00	

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
0.0	7.145965D+02	1.960224D+03	0.0
0.0	1.145628D+03	1.961224D+03	0.0

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
5.439174D+02	1.499900D+04	1.092210D+05	1.032000D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-2.427237D-02	-3.053164D+00	5.434242D-02	5.410668D-01
-3.351766D-04	1.353504D+00	4.622380D-03	-1.066900D-03
9.060366D-02	-7.312436D-02	-6.058291D-02	2.884004D-01
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
3.593232D-03	3.819104D+01	9.594511D-02	-5.401040D+00
2.748860D-03	6.138701D-01	3.217040D-03	8.749895D-03
-1.101552D+00	-2.123474D-01	2.394451D-02	-3.506348D+00
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-9.922378D-05	3.253167D+00	2.339676D-01	5.726061D-02
-1.321589D-03	-4.858605D-01	-4.059381D-04	-4.206748D-03
-6.638741D-02	-2.377938D-01	5.709285D-03	-2.113177D-01
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
-6.510020D-04	-8.577240D-02	7.830890D-02	3.992137D-02
-2.888175D-01	1.341759D-01	9.045067D-01	-9.193348D-01
-1.698433D-02	-2.626123D-01	-1.866647D-01	-5.406281D-02
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
-3.064773D-04	-7.233689D-01	-2.590462D-02	-2.423544D-03
1.026990D-05	1.816578D-01	3.734689D-01	3.269012D-05
-9.102715D-04	-6.647476D-02	-1.627438D-01	-2.897484D-03
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
3.863197D-05	1.980094D-01	4.939874D-02	2.421464D-04
-1.429783D-03	-1.624277D-01	1.230188D-02	-4.551139D-03
-4.813904D-03	-7.171680D-02	1.226979D-01	-1.532313D-02

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	-0.311D-05	-0.219D-02	0.349D-04	0.111D-03	-0.823D-03	0.430D-01
CTR	-0.911D-06	-0.642D-03	0.367D-03	0.117D-02	0.643D-03	0.436D-01
CHF	0.248D-05	0.175D-02	0.207D-05	0.658D-05	-0.248D-03	0.204D-02
CHR	0.448D-05	0.316D-02	0.172D-04	0.549D-04	-0.284D-03	0.209D-02
ALF	0.928D-02	0.654D+01	0.929D-02	0.296D-01	-0.110D+00	0.620D-02
ALR	0.925D-02	0.652D+01	0.931D-02	0.296D-01	-0.115D+00	0.526D-02
VFR	-0.922D-01	-0.650D+02	0.514D+00	0.164D+01	-0.120D+02	0.162D+03
VRR	-0.538D-01	-0.379D+02	0.312D+01	0.993D+01	0.865D+01	0.131D+03
LF			-0.313D+02	-0.998D+02		
DF			-0.144D-14	-0.457D-14		
MF			-0.313D+02	-0.998D+02		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.277D-05	-0.883D-05	-0.189D-03	-0.101D-03	0.517D-02
CYR	0.443D-05	0.141D-04	-0.160D-03	-0.101D-04	0.669D-02
B1F	0.929D-02	0.296D-01	-0.108D+00	-0.241D-01	0.104D+01
B1R	-0.925D-02	0.294D-01	0.116D+00	0.122D-02	0.956D+00
YF	-0.146D+03	-0.464D+03			
LF	0.131D+03	0.418D+03			
NF	-0.146D+03	-0.464D+03			
CTF					0.113D-04
CTR					-0.276D-03

FORCE = 0.157031D+07

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X	BICF	BICR	OMEGAF	OMEGAR
Z	0.147D+02	0.199D+02	0.0	0.0
M	0.250D+01	0.239D+01	0.0	0.0
Y	-0.945D+00	-0.114D+01	0.0	0.0
L	0.274D+00	-0.518D+00	0.0	0.0
N	0.119D+00	-0.256D+00	0.0	0.0
	0.274D-01	0.391D-01	0.0	0.0
CTF	-0.338D-05	-0.600D-05	0.0	0.0
CTR	-0.674D-05	-0.243D-04	0.0	0.0
CHF	-0.517D-02	-0.344D-06	0.0	0.0
CHR	-0.779D-06	-0.693D-02	0.0	0.0
AIF	-0.103D+01	-0.312D-04	0.0	0.0
AIR	-0.174D-03	-0.104D+01	0.0	0.0
VFR	0.135D-01	0.514D-01	0.0	0.0
VRR	0.772D-01	0.365D-01	0.0	0.0
QF	-0.678D-01	-0.794D-03	0.0	0.0
QR	0.481D-03	-0.932D-01	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDEL R	QFALPHA
	-0.119D-03	0.112D+01	0.613D+00	0.122D+01
	-0.874D-03	0.121D+01	0.175D-02	-0.278D-02
	0.647D-02	-0.355D+00	0.232D-02	0.206D-01
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDEL R	QRALPHA
	0.116D-03	-0.810D+01	-0.831D+00	0.165D+01
	0.882D-03	0.155D+01	-0.136D-02	0.281D-02
	0.211D+00	0.834D+00	0.658D-01	0.673D+00

V	RC	GW	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
2.000000D+01	0.0	1.750000D+04	1.546598D-03	2.657084D+02
4.400000D+01	4.030660D+00	-4.664126D+01	4.086598D+00	7.570376D+03
VTF	C6F	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	-2.190042D+01	0.0	-5.689390D-03	5.478188D+03
7.050000D+02	0.0	-8.217409D-02	0.0	8.724651D+03
THEOF	AICF	B1TF	BICF	DFW
THEOR	AICR	B1TR	BICR	IFFW
1.506687D+01	3.070500D+00	-2.500000D+00	-2.500000D+00	2.094401D+01
1.903752D+01	2.106399D+00	-2.500000D+00	-2.500000D+00	-3.686352D+02
THEIAC	DELTAB	DELTAS	DELTAR	DELTAC
1.705219D+01	-3.106926D+00	3.202269D-01	1.042130D+00	7.792398D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
7.560267D+03	4.728190D+02	4.150542D+02	2.212012D+03	1.972698D+03
1.027617D+04	7.282797D+02	3.974509D+02	2.491282D+03	1.415053D+03
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.116869D+04	-3.662513D+02	7.808857D+00	3.400480D+01	5.614210D+02
2.467066D+04	4.680369D+01	-1.832001D+03	-1.393570D+02	1.240130D+03
XR	L/DE	SHPTOT	WFF	NMLB
5.494564D+01	5.662172D-01	1.901551D+03	1.902551D+03	1.051220D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	8.212633D-02	4.774420D-03	6.986739D-01	-4.555412D-02
5.841923D-02	1.110850D-01	1.054627D-02	7.014822D-01	-7.585643D-02
MUF	VF	DFFR	DF	A0F
MUR	VR	DFRF	DF	A0R
4.769506D-02	2.881590D+01	7.953893D-01	1.321279D+06	2.885767D+00
4.784886D-02	2.879115D+01	2.454706D-03		4.117768D+00
A1F	B1F	BETA0F	B180F	A270F
A1R	B1R	BETA0R	B180R	A270R
3.593900D+00	3.204651D+00	-7.026495D-01	6.476232D+00	5.074998D+00
4.048349D+00	2.298174D+00	6.969291D-02	8.162065D+00	7.690079D+00
CAPVF	ALPHAF	BETAFW	AT1PF	BPTPF
CAPVR	ALPHAR	BETARW	AT1PR	BPTPR
3.378562D+01	-5.588785D+00	3.600000D+02	-1.875440D+00	4.815175D+00
4.179160D+01	-3.617843D+01	3.600000D+02	1.079010D+00	4.655184D+00

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMIF	CTFP	A90F
RMTR	CIRP	A90RA
6.281986D-01	8.252316D-02	3.243914D+00
6.276069D-01	9.510569D-02	5.152909D+00

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHTOT	NMLB
DELHPR	RHPR	WFF	RP
0.0	5.614210D+02	1.901551D+03	1.051220D-02
0.0	1.240130D+03	1.902551D+03	1.839636D+02

STABILITY NOT CALCULATED FOR THIS CASE. SKIPPING TO NEXT CASE

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V	RC	GM	RHO	XF LM
FE	ALPHA	ALFF	THETA	LF LM
4.00000D+01	0.0	1.75000D+04	1.546598D-03	3.222990D+02
4.40000D+01	2.561146D+00	-1.574117D+01	2.608338D+00	7.401872D+03
VTF	CGF	BETAF	PSI	XR LM
VTR	CGL	PHI	GAMMA	LR LM
7.05000D+02	-2.190042D+01	0.0	-2.829196D-03	3.557827D+03
7.05000D+02	0.0	-6.381270D-02	0.0	9.718920D+03
THEOF	AICF	BITF	BICF	DFW
THEOR	AICR	BITR	BICR	LFFW
1.410527D+01	3.315152D+00	-2.500000D+00	-2.500000D+00	1.402401D+02
1.874323D+01	2.263845D+00	-2.500000D+00	-2.500000D+00	-2.491244D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.642425D+01	-3.738624D+00	3.494675D-01	1.122983D+00	7.305623D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
7.386595D+03	5.742820D+02	4.396139D+02	2.670378D+03	2.231367D+03
1.030562D+04	9.537547D+02	4.393798D+02	3.266734D+03	1.673344D+03
QF	LEZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
8.577714D+03	-2.426088D+02	1.938921D+01	6.512693D+01	4.311792D+02
2.523006D+04	1.512322D+02	-2.088928D+03	-7.160496D+01	1.167714D+03
XR	L/DE	SHPTOT	WFF	NMLB
1.690105D+02	1.280923D+00	1.698893D+03	1.699893D+03	2.353089D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LANDAR
5.841923D-02	8.124430D-02	3.666822D-03	7.302324D-01	-3.735759D-02
5.841923D-02	1.115380D-01	9.930441D-03	7.349471D-01	-7.553042D-02
MUF	VF	DFFR	DFF	A0F
MUR	VR	DERF		A0R
9.512452D-02	1.817107D+01	1.471839D+00	1.118247D+00	2.791955D+00
9.553895D-02	2.125100D+01	2.682057D-41		4.113905D+00
AIF	BIF	BETA0F	B180F	A270F
AIR	BIR	BETA0R	B180R	A270R
4.339920D+00	3.625388D+00	-1.551371D+00	7.105195D+00	5.511604D+00
5.311653D+00	2.717952D+00	-1.193125D+00	9.389083D+00	8.810021D+00
CAPVF	ALPHA	BETAFW	ATIPF	BPIPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
6.755760D+01	-6.938854D+00	3.600000D+02	-2.598934D+00	5.654940D+00
7.455868D+01	-2.539377D+01	3.600000D+02	8.727993D-01	5.966651D+00

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMIF	CTFP	A90F
RMTR	CTRP	A90RA
5.967253D-01	8.068633D-02	2.294787D+00
5.954644D-01	1.059440D-01	4.108629D+00

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
1.883840D+00	4.330630D+02	1.703251D+03	2.347072D-02
2.473549D+00	1.170188D+03	1.704251D+03	4.107377D+02

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
5.439174D+02	1.499900D+04	1.092210D+05	1.032000D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-2.302539D-02	4.258528D-01	9.394717D-02	1.543860D-01
-1.304762D-03	1.413116D+00	1.966691D-03	-8.821617D-02
2.023655D-02	-6.671679D-02	-3.873806D-02	1.368212D+00
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
-1.240874D-01	-5.356309D+00	5.784176D-01	-4.909591D+00
4.304367D-03	-8.299490D-01	-1.829421D-03	2.910222D-01
-5.070732D-01	-7.322479D-01	2.800548D-02	-3.428368D+01
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-1.665608D-03	-3.356582D-01	2.725236D-01	1.338753D-01
-2.209895D-03	-8.540475D-01	-2.294066D-03	-1.494130D-01
7.623071D-03	-2.512936D-01	1.394785D-03	5.154028D-01
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
-7.917654D-04	-1.931314D+00	1.710843D-01	8.345789D-02
-6.356460D-02	-1.157001D-01	8.751102D-01	-4.297660D+00
5.024526D-03	-3.300429D-01	-2.393578D-01	3.397127D-01
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
-7.826509D-04	-1.122046D+00	9.570037D-03	1.746451D-02
-1.122813D-02	1.049498D-01	3.679783D-01	-7.591442D-01
7.003886D-04	-8.049467D-02	-1.864721D-01	4.735391D-02
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
2.830274D-04	4.418067D-02	4.553970D-02	-4.598829D-03
1.757987D-05	-1.835572D-01	9.769533D-03	1.188591D-03
7.874388D-04	-5.960712D-02	1.223748D-01	5.323945D-02

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	0.116D-04	0.821D-02	0.847D-04	0.573D-02	0.136D-02	0.444D-01
CTR	0.296D-04	0.208D-01	0.829D-04	0.560D-02	0.173D-02	0.323D-01
CHF	0.322D-05	0.227D-02	0.781D-05	0.528D-03	0.448D-03	0.456D-02
CHR	0.744D-05	0.525D-02	0.930D-05	0.629D-03	0.624D-04	0.445D-02
ALF	0.455D-03	0.320D+00	0.306D-03	0.207D-01	0.110D+00	0.274D+00
AIR	0.748D-03	0.528D+00	0.309D-03	0.209D-01	0.108D+00	0.253D+00
VFR	-0.188D+00	0.132D+03	0.368D+00	0.235D-02	0.629D+01	0.157D+03
VRR	-0.694D-01	0.489D+02	0.337D+00	0.228D+02	0.741D+01	0.661D+02
LF			0.116D+02	0.782D+03		
DF			0.221D+00	0.149D+02		
MF			0.703D+02	0.476D+04		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.253D-05	-0.171D-03	-0.304D-03	-0.111D-03	0.489D-02
CYR	0.467D-05	0.316D-03	0.365D-03	0.291D-05	0.683D-02
BIF	0.680D-03	0.460D-01	0.105D+00	-0.200D-01	0.104D+01
BIR	-0.686D-03	-0.464D-01	0.116D+00	-0.264D-02	0.105D+01
YF	-0.233D+02	-0.157D+04			
LF	-0.370D+02	-0.250D+04			
MF	-0.131D+02	-0.885D+03			
CTF					-0.165D-03
CTR					-0.110D-03

FORCE = 0.157031D+07

X	BICF	BICR	OMEGAF	OMEGAR
Z	0.126D+02	0.193D+02	0.0	0.0
M	0.135D+02	0.205D+02	0.0	0.0
Y	-0.294D+01	0.149D+00	0.0	0.0
L	-0.103D+01	0.336D+00	0.0	0.0
N	-0.231D+00	0.492D-01	0.0	0.0
	-0.552D-01	0.460D-01	0.0	0.0
CTF	-0.598D-02	0.898D-05	0.0	0.0
CTR	-0.201D-02	-0.634D-02	0.0	0.0
CHF	-0.539D-02	0.121D-05	0.0	0.0
CHR	0.215D-03	-0.753D-02	0.0	0.0
AIF	-0.104D+01	0.155D-03	0.0	0.0
AIR	0.542D-02	-0.106D+01	0.0	0.0
VFR	-0.211D+02	-0.914D-01	0.0	0.0
VRR	0.895D+01	-0.178D+02	0.0	0.0
QF	0.101D+01	-0.392D-02	0.0	0.0
QR	0.658D+00	-0.217D+01	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELR	QFALPHA
	-0.371D-02	0.163D+01	0.384D+00	0.781D+00
	0.843D-03	0.292D+01	-0.546D-02	0.570D-01
	-0.141D-01	0.669D-02	-0.773D-02	-0.953D+00
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELR	QRALPHA
	0.425D-02	-0.533D+00	-0.929D+00	0.168D+01
	0.147D-02	0.405D+01	0.742D-02	0.993D-01
	0.287D-01	0.820D+00	-0.116D-01	0.194D+01

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V	RC	GW	RHO	XF LM
FE	ALPHA	ALFF	THETA	LF LM
6.000000D+01	0.0	1.750000D+04	1.546598D-03	3.373248D+02
4.400000D+01	7.124392D+00	-8.807578D-01	7.194574D+00	7.851622D+03
VTF	CGF	BETAF	PSI	XR LM
VTR	CGL	PHI	GAMMA	LR LM
7.050000D+02	-2.190042D+01	0.0	-1.835867D-02	2.308546D+03
7.050000D+02	0.0	-1.481418D-01	0.0	9.385416D+03
THEOF	AICF	B1TF	BICF	DFW
THEOR	AICR	B1TR	B1CR	LFFW
1.412529D+01	2.180053D+00	2.800000D+00	2.800000D+00	3.461281D+02
1.787986D+01	1.497980D+00	4.000000D+00	4.000000D+00	-1.143280D+01
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.600258D+01	-3.845518D+00	2.299286D-01	7.493809D-01	6.978740D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
7.858856D+03	-1.158279D+01	3.307627D+02	-1.335728D+02	1.750191D+03
9.664897D+03	-7.200624D+01	3.148832D+02	-2.528399D+02	1.438742D+03
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
8.197830D+03	3.158363D+01	2.905374D+01	8.596540D+01	4.120834D+02
1.922054D+04	3.448737D+02	-8.120481D+02	1.805695D+02	9.661662D+02
XR	L/DE	SHPTOT	WFF	NMLB
3.883480D+02	2.292135D+00	1.478250D+03	1.479250D+03	4.056110D-02
SIGOF	CISF	CPSF	AMTF	LAMDAF
SIGOR	CISR	CPSR	AMTR	LAMDAR
5.841923D-02	8.535418D-02	3.504428D-03	7.588455D-01	-2.517956D-02
5.841923D-02	1.051439D-01	8.216443D-03	7.592575D-01	-5.654893D-02
MUF	VF	DFFR	DF	A0F
MUR	VR	DFRF	DFR	A0R
1.436160D-01	1.355097D+01	1.796671D+00	9.637931D-01	2.898512D+00
1.437392D-01	1.573745D+01	1.608775D-38		3.789431D+00
AIF	BIF	BETA0F	B180F	A270F
AIR	BIR	BETA0R	B180R	A270R
-2.168766D-01	2.842873D+00	3.038058D+00	2.598220D+00	6.496086D+00
-4.105283D-01	2.336668D+00	4.094447D+00	3.269003D+00	9.128366D+00
CAPVF	ALPHAF	BETAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
1.013364D+02	-2.375608D+00	3.600000D+02	-2.592485D+00	2.851133D+00
1.041687D+02	-1.339195D+01	3.600000D+02	-2.861365D-01	2.372456D+00

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CASE 7

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMTF	CTFP	A90F
RMTR	CTRP	A90RA
5.651099D-01	8.558897D-02	1.759566D+00
5.657742D-01	1.023086D-01	2.910975D+00

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	MFF	RP
5.890213D+00	4.179736D+02	1.491181D+03	4.020961D-02
7.040851D+00	9.732071D+02	1.492181D+03	7.036681D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

PAGE 3

V	RC	GN	RHO	XF LM
FE	ALPHA	ALFF	THEIA	LF LM
8.000000D+01	0.0	1.750000D+04	1.546598D-03	4.609548D+02
4.400000D+01	5.229007D+00	8.569569D-01	5.287867D+00	7.689986D+03
VTF	CGF	BETAF	PSI	XR LM
VTR	CGL	PHI	GAMMA	LR LM
7.050000D+02	-2.190042D+01	0.0	-2.013774D-02	1.471108D+03
7.050000D+02	0.0	-2.279371D-01	0.0	9.607411D+03
THEOF	AICF	BITF	BICF	DFW
THEOR	AICR	B1TR	B1CR	LFFW
1.436694D+01	1.623609D+00	2.800000D+00	2.800000D+00	6.263565D+02
1.734647D+01	1.006046D+00	4.000000D+00	4.000000D+00	9.584219D+01
THETAC	DELIAB	DELTAS	DELTAR	DELTAC
1.585670D+01	-3.833749D+00	2.085548D-01	5.492615D-01	6.865662D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
7.702959D+03	1.130282D+02	2.514231D+02	3.859225D+02	1.506114D+03
9.718881D+03	9.932861D+01	2.334313D+02	3.701224D+02	1.275581D+03
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
8.458349D+03	1.525274D+02	5.345913D+01	9.316152D+01	4.251791D+02
1.699780D+04	6.150151D+02	-7.016657D+02	3.856736D+02	8.544348D+02
XR	L/DE	SHPTOT	MFF	NMLB
6.620330D+02	3.532625D+00	1.379614D+03	1.380614D+03	5.794524D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	8.435170D-02	3.615795D-03	7.906116D-01	-2.849934D-02
5.841923D-02	1.056945D-01	7.266259D-03	7.911225D-01	-4.887734D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
1.911205D-01	1.002941D+01	1.786583D+00	9.200334D-01	2.860872D+00
1.915612D-01	1.236400D+01	7.084644D-39		3.748967D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
6.266175D-01	2.446152D+00	2.069756D+00	3.338771D+00	7.422244D+00
6.009620D-01	2.071555D+00	2.949533D+00	4.158047D+00	1.012313D+01
CAPVF	ALPHAF	BETAFW	ATIPF	BTIPF
CAPVR	ALPHAR	BETARW	ATIPR	BTIPR
1.351152D+02	-4.270993D+00	3.600000D+02	-3.644375D+00	2.525135D+00
1.368460D+02	-9.291190D+00	3.600000D+02	-1.170031D+00	2.156964D+00

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMIF	CTFP	A90F	
RMIR	CTRP	A90RA	
5.338145D-01	8.382700D-02	1.216197D+00	
5.333695D-01	1.047285D-01	2.033454D+00	

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELMPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	NFF	RP
1.231261D+01	4.374917D+02	1.407309D+03	5.680571D-02
1.538264D+01	8.698174D+02	1.408309D+03	9.941000D+02

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
5.439174D+02	1.499900D+04	1.092210D+05	1.032000D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-3.23250D-02	3.038188D-01	1.598786D-03	4.889396D-01
-7.51304D-04	1.766520D+00	-2.099413D-03	-1.011271D-01
5.427254D-02	3.788789D-02	-4.407909D-02	7.305197D+00
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
-1.662624D-02	-3.414093D-01	6.156519D-01	-5.583088D+00
2.395069D-03	-1.585627D+00	-1.303514D-02	3.223814D-01
-5.143268D-01	-6.205969D-01	5.732211D 02	-6.922947D+01
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-4.100165D-03	1.156213D-01	3.273575D-01	1.728470D-01
-1.376181D-03	-1.017848D+00	-4.438745D-03	-1.852368D-01
1.642169D-02	-2.459472D-01	1.777378D-03	2.210393D+00
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
3.937448D-04	-1.708108D+00	1.216202D-01	6.216071D-02
-8.385169D-02	-1.842825D-01	8.569165D-01	-1.128661D+01
8.371784D-03	-3.715449D-01	-1.618708D-01	1.126860D+00
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
-4.567357D-04	-9.835750D-01	5.032232D-03	2.347301D-02
-8.470574D-03	5.513541D-03	3.578663D-01	-1.140157D+00
1.056434D-03	-1.219221D-01	-1.613389D-01	1.421982D-01
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
-6.627136D-05	4.441981D-03	4.008443D-02	-9.076161D-03
-2.686040D-03	-9.551375D-02	1.331948D-02	-3.615466D-01
1.765167D-04	-6.121512D-02	1.199012D-01	2.375952D-02

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	-0.954D-05	-0.672D-02	0.103D-03	0.139D-01	-0.156D-02	0.533D-01
CTR	0.121D-04	0.854D-02	0.630D-04	0.848D-02	0.221D-02	0.340D-01
CHF	0.188D-05	0.133D-02	0.444D-05	0.597D-03	-0.424D-03	0.322D-02
CHR	0.346D-05	0.244D-02	0.190D-05	0.255D-03	-0.184D-03	0.224D-02
AIF	0.365D-03	0.257D+00	0.671D-03	0.903D-01	-0.117D+00	0.579D+00
AIR	0.643D-03	0.453D+00	0.450D-03	0.605D-01	-0.988D-01	0.473D+00
VFR	-0.923D-01	-0.651D+02	0.206D+00	0.278D+02	-0.339D+01	0.108D+03
VFR	-0.599D-01	-0.422D+02	0.127D+00	0.171D+02	0.474D+01	0.622D+02
LF			0.205D+02	0.277D+04		
DF			-0.594D+00	-0.800D+02		
MF			0.165D+03	0.223D+05		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.244D-05	-0.329D-03	-0.302D-03	-0.115D-03	0.505D-02
CYR	0.373D-05	0.502D-03	0.290D-03	0.132D-04	0.637D-02
BIF	-0.371D-03	-0.499D-01	-0.100D+00	-0.253D-01	0.103D+01
BIR	0.521D-03	0.701D-01	0.108D+00	0.600D-02	0.103D+01
YF	-0.359D+02	-0.483D+04			
LF	-0.138D+02	-0.186D+04			
NF	-0.277D+03	-0.373D+05			
CTF					-0.267D-03
CTR					-0.253D-03

FORCE = 0.157031D+07

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X	BICF	BICR	OMEGAF	OMEGAR
Z	0.106D+02	0.143D+02	0.0	0.0
M	0.278D+02	0.422D+02	0.0	0.0
Y	-0.578D+01	0.187D+01	0.0	0.0
L	-0.131D+01	0.520D+00	0.0	0.0
N	-0.456D+00	0.584D-01	0.0	0.0
	-0.911D-02	0.737D-01	0.0	0.0
CTF	-0.141D-01	-0.290D-05	0.0	0.0
CTR	-0.512D-02	-0.141D-01	0.0	0.0
CHF	-0.559D-02	-0.220D-06	0.0	0.0
CHR	0.135D-03	-0.672D-02	0.0	0.0
AIF	-0.111D+01	-0.417D-04	0.0	0.0
AIR	0.316D-01	-0.111D+01	0.0	0.0
VFR	-0.286D+02	0.268D-01	0.0	0.0
VRR	0.111D+02	-0.275D+02	0.0	0.0
QF	0.340D+01	0.837D-03	0.0	0.0
QR	0.111D+01	-0.316D+01	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELRA	QFALPHA
	-0.155D-02	0.845D+00	0.336D+00	0.691D+00
	0.912D-03	0.193D+01	-0.123D-01	0.123D+00
	-0.257D-01	-0.145D+00	-0.187D-01	-0.346D+01
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELRA	QRALPHA
	0.198D-02	-0.515D+00	-0.822D+00	0.149D+01
	0.841D-03	0.750D+00	0.472D-02	0.113D+00
	0.153D-01	0.730D+00	-0.481D-02	0.206D+01

CASE 8

PAGE 3

V	RC	GW	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
1.000000D+02	0.0	1.750000D+04	1.546598D-03	6.199767D+02
4.400000D+01	2.961041D+00	1.716436D-01	3.032661D+00	7.576306D+03
VTF	CGF	BEIAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	-2.190042D+01	0.0	-1.560560D-02	1.192451D+03
7.050000D+02	0.0	-3.100212D-01	0.0	9.730689D+03
THEOF	AICF	B1IF	B1CF	DFW
THEOR	AICR	B1IR	B1CR	LEFW
1.502143D+01	1.385345D+00	2.800000D+00	2.800000D+00	9.755111D+02
1.756203D+01	8.420972D-01	4.000000D+00	4.000000D+00	1.303584D+02
THEIAC	DELTAB	DELTAS	DELTAR	DELTAC
1.629173D+01	-3.944128D+00	1.787228D-01	4.257386D-01	7.202893D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
7.597622D+03	2.468369D+02	2.247382D+02	9.862456D+02	1.389847D+03
9.799140D+03	2.917345D+02	2.071230D+02	1.119359D+03	1.252221D+03
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
9.689118D+03	1.805763D+02	7.936401D+01	2.007931D+02	4.870466D+02
1.748080D+04	9.674748D+02	-1.581146D+03	5.388623D+02	8.787138D+02
XR	L/DE	SHPTOT	WFF	NMLB
1.019167D+03	4.661628D+00	1.465760D+03	1.466760D+03	6.817746D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	ANTR	LAMDAR
5.841923D-02	8.250241D-02	4.141927D-03	8.224056D-01	-3.853007D-02
5.841923D-02	1.073846D-01	7.472732D-03	8.232801D-01	-5.084318D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
2.38075D-01	7.930220D+00	1.747677D+00	9.122845D-01	2.794333D+00
2.389710D-01	1.008884D+01	1.752694D-39		3.789394D+00
AIF	B1F	BETAOF	B180F	A270F
AIR	B1R	BETAOR	B180R	A270R
1.601531D+00	2.257216D+00	9.542303D-01	4.174348D+00	8.509979D+00
1.817757D+00	2.033602D+00	1.651435D+00	5.311039D+00	1.160556D+01
CAPVF	ALPHA	BEIAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
1.688940D+02	-6.538959D+00	3.600000D+02	-4.937428D+00	2.767657D+00
1.704318D+02	-8.691773D+00	3.600000D+02	-2.221201D+00	2.727596D+00

PAGE 4

CASE 8

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMIF	CTFP	A90F
RMTR	CTRP	A90RA
5.028322D-01	8.258781D-02	7.201919D-01
5.013536D-01	1.060723D-01	1.340670D+00

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
2.325058D+01	5.102971D+02	1.518873D+03	6.579497D-02
2.986207D+01	9.085759D+02	1.519873D+03	1.151412D+03

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

PAGE 3

CASE 10

V	RC	GW	RHO	XF	
FE	ALPHA	ALFF	THETA	LW	
1.120000D+02	0.0	1.750000D+04	1.546598D-03	LF	7.056416D+02
4.400000D+01	1.498036D+00	-7.425898D-01	1.538058D+00		7.563292D+03
VTF	CGF	BETAF	PSI	XR	
VTR	CGL	PHI	GAMMA	LW	
7.050000D+02	-2.190042D+01	0.0	-9.841181D-03	LR	1.151527D+03
7.050000D+02	0.0	-3.837659D-01	0.0		9.809496D+03
THEOF	AICF	BIF	BICF	DEFW	
THEOR	AICR	BIR	BICR	LFFW	
1.567041D+01	1.319250D+00	2.800000D+00	2.800000D+00		1.222098D+03
1.790235D+01	8.275693D-01	4.000000D+00	4.000000D+00		9.493872D+01
THETAC	DELTAB	DELTAS	DELTAR	DELTAC	
1.678638D+01	-3.906059D+00	1.613866D-01	4.211697D-01		7.586343D+00
TF	HF	YF	MHF	LHF	
TR	HR	YR	MHR	LHR	
7.568076D+03	3.513084D+02	2.22476D+02	1.443954D+03		1.434555D+03
9.868458D+03	4.071553D+02	2.049993D+02	1.615362D+03		1.348675D+03
QF	LFZ	YFY	LF	RHPF	
QR	DFX	MF	NF	RHPR	
1.097538D+04	1.268552D+02	1.021610D+02	2.979661D+02		5.517035D+02
1.878043D+04	1.219199D+03	-2.756694D+03	6.424286D+02		9.440432D+02
XR	L/DE	SHPTOT	WFF	NMLB	
1.246549D+03	5.157374D+00	1.595747D+03	1.596747D+03		7.014262D-02
SIGOF	CISF	CPSF	AMTF	LANDAF	
SIGOR	CISR	CPSR	AMTR	LANDAR	
5.841923D-02	8.297046D-02	4.691781D-03	8.415785D-01		-4.736936D-02
5.841923D-02	1.081219D-01	8.028305D-03	8.427375D-01		-5.548091D-02
MUF	VF	DFFR	DF	AOF	
MUR	VR	DFRF		AOR	
2.657014D-01	7.062786D+00	1.682097D+00	9.153800D-01		2.828122D+00
2.670777D-01	9.096917D+00	2.723933D-41			3.815689D+00
AIF	BIF	BETAOF	B180F	A270F	
AIR	BIR	BETAOR	B180R	A270R	
2.345137D+00	2.329864D+00	1.697029D-01	4.891918D+00		9.442717D+00
2.623707D+00	2.190317D+00	7.913592D-01	6.071621D+00		1.262687D+01
CAPVF	ALPHAF	BETAFW	ATIPF	BPTPF	
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR	
1.891613D+02	-8.001964D+00	3.600000D+02	-5.656827D+00		3.305742D+00
1.906674D+02	-9.057839D+00	3.600000D+02	-2.878256D+00		3.417796D+00

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
		A90F	
	CITP	A90RA	
	CTRP		
RMIF			
RMTR			
4.842563D-01	8.222793D-02	6.859578D-01	
4.822773D-01	1.069314D-01	9.633561D-01	

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF DELHPR	RHPF RHPR	SHPTOT WFF	NMLB RP
3.166955D+01	5.833730D+02	1.668600D+03	6.708193D-02
4.118392D+01	9.852271D+02	1.669600D+03	1.173934D+03

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
5.439174D+02	1.499900D+04	1.092210D+05	1.032000D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-4.058549D-02	3.380914D-01	-5.218947D-03	3.688790D-01
-7.172832D-04	1.245952D+00	-2.544889D-03	-1.356649D-01
4.829042D-02	1.167099D-02	-5.847004D-02	9.133513D+00
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
9.299792D-03	-8.812683D-01	4.836907D-01	-6.559883D+00
4.242992D-03	-1.827817D+00	-1.264229D-02	8.025075D-01
-6.126975D-01	-5.856489D-01	8.971352D-02	-1.158839D+02
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-3.050265D-03	1.328223D-01	3.495545D-01	1.782986D-01
-1.015924D-03	-1.000672D+00	-5.045245D-03	-1.921490D-01
1.531532D-02	-2.730563D-01	3.773130D-03	2.896697D+00
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
1.409796D-03	-1.252384D+00	8.668914D-02	7.020149D-02
-1.119750D-01	-1.891395D-01	8.616181D-01	-2.117864D+01
4.972672D-03	-2.577963D-01	-1.644140D-01	9.405173D-01
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
1.225308D-04	-8.426133D-01	-1.503988D-02	2.417239D-02
-9.907715D-03	-3.016521D-02	3.605248D-01	-1.873917D+00
1.647618D-03	-6.377593D-02	-1.521088D-01	3.116259D-01
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
-2.252760D-04	5.555583D-03	5.620808D-02	-1.454323D-02
-3.500338D-03	-7.437870D-02	1.246805D-02	-6.620441D-01
-6.033337D-04	-7.079540D-02	1.163958D-01	-1.141128D-01

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	-0.107D-04	-0.753D-02	0.110D-03	0.208D-01	-0.154D-02	0.591D-01
CTR	0.461D-05	0.525D-02	0.837D-04	0.158D-01	0.225D-02	0.430D-01
CHF	0.154D-05	0.108D-02	0.836D-05	0.158D-02	-0.396D-03	0.552D-02
CHR	0.319D-05	0.225D-02	0.391D-05	0.740D-03	-0.219D-04	0.387D-02
ALF	0.359D-03	0.253D+00	0.964D-03	0.182D+00	-0.120D+00	0.845D+00
ALR	0.621D-03	0.438D+00	0.768D-03	0.145D+00	-0.928D-01	0.728D+00
VFR	-0.523D-01	-0.369D+02	0.161D+00	0.304D+02	-0.234D+01	0.860D+02
VRR	-0.395D-01	-0.279D+02	0.122D+00	0.231D+02	0.342D+01	0.605D+02
LF			0.295D+02	0.558D+04		
DF			-0.785D+00	-0.148D+03		
MF			0.225D+03	0.426D+05		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.256D-05	-0.485D-03	-0.214D-03	-0.936D-04	0.501D-02
CYR	0.377D-05	0.713D-03	0.220D-03	-0.424D-05	0.634D-02
B1F	-0.273D-03	-0.517D-01	-0.974D-01	-0.217D-01	0.103D+01
B1R	0.380D-03	0.719D-01	0.105D+00	0.245D-02	0.969D+00
YF	-0.510D+02	-0.964D+04			
LF	-0.320D+02	-0.605D+04			
NF	-0.356D+03	-0.673D+05			
CTF					-0.303D-03
CTR					-0.496D-03

FORCE = 0.157031D+07

X	BICF	BICR	OMEGAF	OMEGAR
Z	0.913D+01	0.149D+02	0.0	0.0
M	0.461D+02	0.616D+02	0.0	0.0
Y	-0.774D+01	0.315D+01	0.0	0.0
L	-0.158D+01	0.859D+00	0.0	0.0
N	-0.346D+00	0.218D+00	0.0	0.0
	-0.283D+00	0.172D+00	0.0	0.0
CTF	-0.210D-01	-0.163D-05	0.0	0.0
CTR	0.552D-02	-0.208D-01	0.0	0.0
CHF	-0.626D-02	-0.151D-06	0.0	0.0
CHR	0.232D-03	-0.776D-02	0.0	0.0
AIF	-0.120D+01	-0.156D-04	0.0	0.0
AIR	0.458D-01	-0.120D+01	0.0	0.0
VFR	-0.304D+02	0.132D-01	0.0	0.0
VRR	0.846D+01	-0.298D+02	0.0	0.0
QF	-0.147D+01	0.139D-03	0.0	0.0
QR	0.313D+01	-0.718D+01	0.0	0.0
	QFU	QFP	QFDELB	QFDELIAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELR	QFALPHA
	-0.318D-02	0.649D+00	0.446D+00	0.980D+00
	0.429D-03	0.241D+01	-0.137D-01	0.811D-01
	-0.836D-02	-0.321D+00	-0.196D-01	-0.158D+01
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELR	QRALPHA
	0.371D-02	-0.380D+00	-0.117D+01	0.188D+01
	0.111D-02	0.979D+00	0.145D-03	0.210D+00
	0.471D-01	0.948D+00	0.805D-01	0.891D+01

CATALOG OF TRIM & STABILITY DERIVATIVE DATA

A-97 TRIM ANALYSIS (CH-46E)

GW = 17,500 lb CG = 20 in. aft

<u>ALTITUDE</u>	<u>AIRSPEED</u>	<u>CLIMB RATE</u>	<u>SIDESLIP</u>	<u>DERIVATIVES</u>
0 ft	60 kt	-2067 ft/min	0 deg	
	80	-2282		X
	100	-2875		
	120	-3987		
	60	2774		
	80	2547		X
	100	2186		
	120	1517		

CASE 9

PAGE 3

V	RC	GW	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
6.350000D+01	-2.067000D+03	1.750000D+04	2.378000D-03	-1.759397D+03
4.400000D+01	2.097616D+01	1.695871D+01	2.273440D+00	6.503186D+03
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	-2.190042D+01	0.0	-6.400414D-02	-2.368837D+03
7.050000D+02	0.0	-1.707091D-01	-1.873666D+01	9.500941D+03
THEOF	AICF	B1TF	BICF	DFW
THEOR	AICR	B1TR	B1CR	LFFW
7.538700D+00	9.307894D-02	-2.500000D+00	-2.500000D+00	7.816693D+02
9.447891D+00	-5.591177D-02	-2.500000D+00	-2.500000D+00	7.756623D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
8.493296D+00	-2.855392D+00	5.134689D-02	1.083889D-02	1.157593D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
6.723222D+03	4.303466D+02	-6.223899D+00	1.999214D+03	2.758374D+02
9.765003D+03	7.238738D+02	-1.848707D+01	2.426346D+03	3.267604D+02
QF	LFZ	YFY	LF	RHPF
QR	DEFX	MF	NF	RHPR
-1.012573D+03	1.004080D+03	4.026168D+01	-9.582542D+01	-5.089938D+01
-1.339767D+03	4.521964D+02	6.637528D+03	3.625399D+01	-6.734657D+01
XR	L/DE	SHPTOT	WFF	NMLB
-4.820267D+03	3.702374D+00	-1.824596D+01	-1.724596D+01	-3.486894D+00
SIGOF	CTSF	CPSF	AMTF	LANDAF
SIGOR	CTSR	CPSR	AMIR	LANDAR
5.841923D-02	4.801855D-02	-2.815205D-04	7.247509D-01	1.988462D-02
5.841923D-02	6.954498D-02	-3.724886D-04	7.238444D-01	1.008844D-02
MUF	VF	DFFR	DFP	A0F
MUR	VR	DFRF	DFP	A0R
1.490830D-01	7.319257D+00	1.092994D+00	8.675647D-01	1.994464D+00
1.476209D-01	1.078985D+01	0.0		3.308074D+00
A1F	B1F	BETA0F	B180F	A270F
A1R	B1R	BETA0R	B180R	A270R
3.247772D+00	4.478693D-01	-1.297761D+00	5.198477D+00	1.643854D+00
3.942660D+00	5.305536D-01	-7.032018D-01	7.178741D+00	3.707732D+00
CAPVF	ALPHA	BETAFW	AT1PF	BPTPF
CAPVR	ALPHAR	BETARW	AT1PR	BPTPR
1.072477D+02	1.147616D+01	3.600000D+02	1.472394D+01	3.278507D+00
1.056013D+02	9.760372D+00	3.600000D+02	1.791882D+01	3.978197D+00

PAGE 4

CASE 9

TP
0.0

NFF
NFF
0.0
0.0

ZFF
YFF
0.0
0.0

XFF
LFF
0.0
0.0

RMTR
5.381654D-01
5.383578D-01

A90F
A90RA
3.597747D+02
6.095689D-01

CTFP
CTRP
4.610522D-02
6.735821D-02

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF
DELHPR

RHPF
RHPR

NMLB
RP

SHPTOT
NFF

5.847039D+00
8.542332D+00

-4.505234D+01
-5.880424D+01

-3.856585D+00
-2.856585D+00

-2.222934D+01
-3.890135D+05

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

CASE 11

PAGE 3

V	RC	GW	RHO	XF	LW
FE	ALPHA	ALFF	THETA	LF	LW
8.32000D+01	-2.282000D+03	1.750000D+04	2.378000D-03	-1.200669D+03	
4.400000D+01	1.788305D+01	1.563737D+01	2.219813D+00	6.400961D+03	
VTF	CGF	BETAF	PSI	XR	LW
VTR	CGL	PHI	GAMMA	LR	LW
7.050000D+02	-2.190042D+01	0.0	-9.846453D-02	-1.807731D+03	
7.050000D+02	0.0	-3.162685D-01	-1.570365D+01	9.240695D+03	
THEOF	AICF	BIIF	BICF	DFW	
THEOR	AICR	BITR	BICR	LFFW	
7.598184D+00	-3.393968D-01	-8.000000D-01	-8.000000D-01	1.276717D+03	
8.969194D+00	-4.690230D-01	-8.000000D-01	-8.000000D-01	1.306588D+03	
THETAC	DELTAB	DELTAS	DELTAR	DELTAC	
8.283689D+00	-3.013310D+00	4.468189D-02	-1.556556D-01	9.951077D-01	
TF	HF	YF	MHF	LHF	
TR	HR	YR	MHR	LHR	
6.507616D+03	2.546426D+02	-4.798878D+01	1.046936D+03	1.048351D+02	
9.404197D+03	4.684306D+02	-7.418891D+01	1.518188D+03	2.090826D+02	
QF	LFZ	YFY	LF	RHPF	
QR	DFX	MF	NF	RHPR	
-4.681699D+02	1.635508D+03	7.264252D+01	-1.738120D+02	-2.353367D+01	
-2.226755D+03	8.138120D+02	1.062730D+04	2.009610D+02	-1.119331D+02	
XR	L/DE	SNPTOT	WFF	NMLB	
-3.436233D+03	5.307188D+00	-3.546682D+01	-3.446682D+01	-2.323815D+00	
SIGOF	CTSF	CPSF	AMTF	LAMDAF	
SIGOR	CTSR	CPSR	AMTR	LAMDAR	
5.841923D-02	4.636797D-02	-1.301629D-04	7.546973D-01	2.143701D-02	
5.841923D-02	6.683269D-02	-6.190934D-04	7.534463D-01	1.716327D-02	
MUF	VF	DFFR	DFF	A0F	
MUR	VR	DFRF		A0R	
1.971893D-01	5.373317D+00	1.228931D+00	8.662997D-01	1.875141D+00	
1.957341D-01	7.827248D+00	6.873521D-38		3.073206D+00	
AIF	BIF	BETA0F	B180F	A270F	
AIR	BIR	BETA0R	B180R	A270R	
1.700113D+00	1.702163D-01	1.045762D-01	3.505061D+00	1.929385D+00	
2.465775D+00	3.394799D-01	4.856101D-01	5.423392D+00	3.938349D+00	
CAPVF	ALPHAF	BETAFW	ATIPF	BPTPF	
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR	
1.405198D+02	8.383048D+00	3.453510D-17	1.008316D+01	1.708613D+00	
1.394239D+02	8.217233D+00	3.479186D-17	1.334882D+01	2.489034D+00	

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CASE 11

XFF	ZFF	NFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMIF	CIFP	A90F
RMTR	CTRP	A90RA
5.068726D-01	4.538048D-02	3.595559D+02
5.074283D-01	6.551316D-02	1.100632D-01

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	NFF	RP
1.112021D+01	-1.241347D+01	-8.293011D+00	-1.140616D+01
1.605360D+01	-9.587955D+01	-7.293011D+00	-1.996432D+05

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
5.439174D+02	1.499900D+04	1.092210D+05	1.032000D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-3.375251D-02	2.694718D-01	1.466294D-01	6.584259D-01
-1.076400D-03	2.252729D+00	-1.039920D-04	1.439817D-01
7.747241D-02	3.496972D-02	-4.216259D-02	1.036289D+01
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
-2.324164D-03	1.833234D+00	6.360355D-01	-9.010966D+00
-2.146724D-03	-1.164579D-01	-5.090875D-03	-2.871507D-01
-8.521258D-01	-6.392303D-01	2.076064D-02	-1.139823D+02
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-5.169249D-03	3.208450D-01	4.734423D-01	2.280597D-01
1.328681D-04	-1.460866D+00	-1.417554D-03	1.77273D-02
2.322943D-02	-8.442974D-02	2.169258D-03	3.107221D+00
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
2.355085D-03	-2.706531D+00	-1.675719D-02	-1.674393D-02
-1.392085D-01	3.732028D-01	7.684432D-01	-1.862084D+01
-1.846109D-03	-2.691089D-01	-2.297610D-01	-2.469398D-01
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
-1.120745D-03	-1.013077D+00	3.322606D-02	2.101623D-02
9.835735D-04	4.670493D-02	3.370976D-01	1.315650D-01
1.890041D-03	-8.003643D-02	-1.678320D-01	2.528162D-01
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
8.536976D-04	-6.916390D-02	-2.480472D-02	-1.879283D-02
-4.342210D-03	2.314828D-03	7.785915D-03	-5.808239D-01
-1.248160D-03	-2.738495D-02	1.074514D-01	-1.669567D-01

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	-0.109D-04	-0.768D-02	0.104D-03	0.139D-01	-0.175D-02	0.529D-01
CTR	0.541D-05	0.382D-02	0.728D-04	0.973D-02	0.186D-02	0.388D-01
CHF	-0.335D-07	-0.236D-04	0.467D-05	0.624D-03	-0.351D-03	0.319D-02
CHR	0.125D-05	0.879D-03	0.480D-05	0.641D-03	-0.226D-03	0.367D-02
ALF	0.377D-04	0.266D-01	0.630D-03	0.843D-01	-0.802D-01	0.587D+00
AIR	0.245D-03	0.173D+00	0.467D-03	0.625D-01	-0.605D-01	0.500D+00
VFR	-0.592D-01	-0.418D+02	0.198D+00	0.264D+02	-0.342D+01	0.106D+03
VRR	-0.463D-01	-0.326D+02	0.137D+00	0.183D+02	-0.368D+01	0.790D+02
LF			0.385D+02	0.515D+04		
DF			-0.195D+01	-0.260D+03		
MF			0.305D+03	0.408D+05		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.494D-06	-0.661D-04	-0.268D-03	-0.461D-04	0.274D-02
CYR	0.102D-05	0.136D-03	0.342D-03	0.145D-04	0.396D-02
B1F	0.103D-03	0.138D-01	-0.653D-01	-0.105D-01	0.102D+01
B1R	-0.980D-04	-0.131D-01	0.661D-01	0.249D-02	0.102D+01
YF	-0.721D+02	-0.964D+04			
LF	0.561D+02	0.751D+04			
NF	-0.459D+03	-0.614D+05			
CTF					-0.659D-04
CTR					-0.769D-04

FORCE = 0.241446D+07

X	BICF	BICR	OMEGAF	OMEGAR
Z	0.503D+01	0.136D+02	0.0	0.0
M	0.485D+02	0.634D+02	0.0	0.0
Y	-0.791D+01	0.339D+01	0.0	0.0
L	0.615D+00	-0.461D+00	0.0	0.0
N	-0.732D+00	0.434D+00	0.0	0.0
	0.715D+00	-0.554D+00	0.0	0.0
CTF	-0.144D-01	-0.892D-07	0.0	0.0
CTR	0.368D-02	-0.140D-01	0.0	0.0
CHF	-0.334D-02	-0.700D-07	0.0	0.0
CHR	0.242D-03	-0.480D-02	0.0	0.0
AIF	-0.111D+01	-0.180D-04	0.0	0.0
AIR	0.219D-01	-0.110D+01	0.0	0.0
VFR	-0.288D+02	0.484D-02	0.0	0.0
VRR	0.727D+01	-0.283D+02	0.0	0.0
QF	0.160D+02	0.498D-03	0.0	0.0
QR	-0.480D+01	0.181D+02	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELR	QFALPHA
	0.126D-01	-0.455D+00	-0.315D+00	-0.630D+00
	-0.641D-03	0.364D+01	-0.595D-02	-0.857D-01
	-0.115D+00	-0.197D+00	-0.827D-02	-0.154D+02
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELR	QRALPHA
	-0.975D-02	0.109D+01	0.439D+00	-0.984D-01
	-0.123D-02	0.124D+00	0.677D-02	-0.164D+00
	-0.956D-01	0.128D+00	-0.141D-01	-0.128D+02

V	RC	GW	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
1.041000D+02	-2.875000D+03	1.750000D+04	2.378000D-03	-9.029539D+02
4.400000D+01	1.803203D+01	1.667665D+01	2.298366D+00	5.998181D+03
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	-2.190042D+01	0.0	-1.481994D-01	-1.532381D+03
7.050000D+02	0.0	-4.822582D-01	-1.581515D+01	8.678855D+03
THEOF	AICF	BIIF	BICF	DFW
THEOR	AICR	BITR	BICR	LFFW
7.387276D+00	-7.153574D-01	1.600000D+00	1.600000D+00	2.050763D+03
8.244893D+00	-8.633645D-01	1.600000D+00	1.600000D+00	2.220356D+03
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
7.816084D+00	-3.002830D+00	4.441138D-02	-3.296814D-01	6.326234D-01
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
6.065764D+03	3.057394D+00	-8.095296D+01	-4.146762D+02	-9.444617D+01
8.812707D+03	8.315786D+01	-1.222470D+02	5.192430D+01	3.851068D+01
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
2.090031D+01	2.746111D+03	1.124888D+02	-2.680358D+02	1.050604D+00
-3.108020D+03	1.262729D+03	1.809588D+04	1.463526D+02	-1.562320D+02
XR	L/DE	SHPTOT	WFF	NMLB
-2.670954D+03	7.004666D+00	-5.518144D+01	-5.418144D+01	-1.848592D+00
SIGOF	CTSF	CPSF	AMTF	LAMDAR
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	4.312745D-02	5.810806D-06	7.862794D-01	3.132920D-02
5.841923D-02	6.256461D-02	-8.641071D-04	7.844557D-01	3.255293D-02
MUF	VF	DEFR	DF	AOF
MUR	VR	DFRF	DF	AOR
2.466282D-01	3.997758D+00	1.213401D+00	8.822738D-01	1.673973D+00
2.447796D-01	5.843537D+00	1.512454D-35		2.771821D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
-6.733064D-01	-1.533482D-01	2.220880D+00	8.925854D-01	1.952813D+00
8.430717D-02	6.252806D-02	2.482886D+00	2.675156D+00	3.909647D+00
CAPVF	ALPHAF	BETAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
1.758187D+02	8.532028D+00	3.600000D+02	7.858722D+00	6.905485D-01
1.749552D+02	9.472585D+00	3.600000D+02	1.111634D+01	1.049641D-01

PAGE 4

CASE 10

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTR	CTFP	A90F	
RMTR	CTRP	A90RA	
4.750046D-01	4.252492D-02	3.592832D+02	
4.758843D-01	6.152992D-02	3.596292D+02	

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
2.036941D+01	2.142002D+01	-5.339229D+00	-2.399043D+01
2.947280D+01	-1.267592D+02	-4.339229D+00	-4.198326D+05

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

V	RC	GM	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
1.265000D+02	-3.987000D+03	1.750000D+04	2.378000D-03	-7.669524D+02
4.400000D+01	1.941095D+01	1.859074D+01	1.279146D+00	5.067007D+03
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	-2.190042D+01	0.0	-2.563453D-01	-1.357359D+03
7.050000D+02	0.0	-7.480602D-01	-1.812079D+01	7.922761D+03
THEOF	AICF	B1TF	BICF	DFW
THEOR	AICR	B1TR	BICR	LFFW
6.334232D+00	-9.491497D-01	2.800000D+00	2.800000D+00	3.210994D+03
7.278926D+00	-9.501957D-01	4.000000D+00	4.000000D+00	3.659059D+03
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
6.806579D+00	-3.415253D+00	1.325390D-02	-4.019255D-01	-1.499389D-01
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
5.123395D+03	-1.166133D+02	-8.231999D+01	-1.416923D+03	-2.487287D+02
8.033908D+03	-2.624709D+02	-1.544362D+02	-1.592191D+03	-7.033850D+01
QF	LFZ	YFY	LF	RHPF
QR	DFX	NF	NF	RHPR
2.686637D+02	4.518221D+03	1.608715D+02	-3.803326D+02	1.350502D+01
-3.727228D+03	1.812421D+03	3.028677D+04	-2.319506D+02	-1.873580D+02
XR	L/DE	SHPTOT	WFF	NMLB
-2.237279D+03	8.548429D+00	-7.385298D+01	-7.285298D+01	-1.650255D+00
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	3.651582D-02	7.469520D-05	8.204742D-01	4.823161D-02
5.841923D-02	5.664408D-02	-1.036262D-03	8.191210D-01	5.452568D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
2.985283D-01	2.769753D+00	1.124145D+00	9.046353D-01	1.194531D+00
2.959690D-01	4.364072D+00	3.713405D-35		2.457233D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
-2.301212D+00	-4.038529D-01	3.401179D+00	-1.193089D+00	1.295817D+00
-2.586046D+00	-1.142055D-01	4.773217D+00	-3.154299D-01	3.688244D+00
CAPVF	ALPHA	BETAFW	ATPF	BPTF
CAPVR	ALPHAR	BETARW	ATPR	BPTR
2.136509D+02	9.910953D+00	1.513471D-16	7.609741D+00	2.336381D+00
2.130034D+02	1.159297D+01	1.526559D-16	9.824906D+00	2.588567D+00

CASE 11

PAGE 4

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTF	CTFP	A90F	
RMTR	CTRP	A90RA	
4.423273D-01	3.592323D-02	3.588861D+02	
4.434228D-01	5.616949D-02	3.593106D+02	

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
2.877550D+01	4.228052D+01	-8.416981D-02	1.381260D+02
4.499331D+01	-1.423647D+02	9.158302D-01	2.417206D+06

STABILITY NOT CALCULATED FOR THIS CASE. SKIPPING TO NEXT CASE

V	RC	GW	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
6.610000D+01	2.774000D+03	1.750000D+04	2.378000D-03	3.904664D+03
4.400000D+01	-2.397299D+01	-2.903917D+01	5.128361D-01	7.414497D+03
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	-2.190042D+01	0.0	2.016112D-01	5.066029D+03
7.050000D+02	0.0	-4.676736D-01	2.446471D+01	9.919136D+03
THEOF	AICF	B1TF	B1CF	DFW
THEOR	AICR	B1TR	B1CR	LEFW
1.779935D+01	1.609212D+00	-2.500000D+00	-2.500000D+00	1.314471D+03
1.915871D+01	7.903430D-01	-2.500000D+00	-2.500000D+00	-1.603882D+03
THEIAC	DELIAB	DELIAS	DELIAR	DELIAC
1.847903D+01	-2.425170D+00	2.703405D-01	4.712514D-01	8.898474D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
8.338017D+03	8.358478D+02	2.914588D+02	3.319474D+03	1.365753D+03
1.107334D+04	1.197960D+03	2.233908D+02	3.680367D+03	9.594943D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
2.273210D+04	-1.999603D+03	7.965919D+01	3.084529D+02	1.142683D+03
3.057465D+04	5.494138D+02	-1.338424D+04	-8.752966D+02	1.536908D+03
XR	L/DE	SHPTOT	WFF	NMLB
8.573135D+03	3.417444D+00	2.779590D+03	2.780590D+03	2.163760D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	5.962427D-02	6.320089D-03	7.238540D-01	-9.914350D-02
5.841923D-02	7.911752D-02	8.500514D-03	7.269178D-01	-1.039653D-01
MUF	VF	DFFR	DFF	A0F
MUR	VR	DFRF		A0R
1.320896D-01	8.264887D+00	6.357703D-01	1.196400D+00	3.478990D+00
1.357735D-01	1.058490D+01	5.274593D-03		4.663318D+00
A1F	B1F	BETA0F	B180F	A270F
A1R	B1R	BETA0R	B180R	A270R
5.397661D+00	2.218066D+00	-1.979232D+00	8.797505D+00	6.446060D+00
5.986533D+00	1.558080D+00	-1.390841D+00	1.054589D+01	8.191339D+00
CAPVF	ALPHAF	BETAFW	AT1PF	BPTPF
CAPVR	ALPHAR	BETARW	AT1PR	BPTPR
1.116698D+02	-3.349695D+01	3.600000D+02	3.319247D+02	5.835628D+00
1.144318D+02	-3.322938D+01	3.600000D+02	3.350135D+02	6.185967D+00

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CASE 12

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMIF	CTIF	A90F	
RMIR	CTRP	A90RA	
5.441927D-01	5.256608D-02	2.219137D+00	
5.412250D-01	7.032305D-02	2.892302D+00	

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
7.486602D+00	1.150169D+03	2.797093D+03	2.362323D-02
1.001560D+01	1.546923D+03	2.798093D+03	4.134066D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

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CASE 12

V	RC	GW	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
8.400000D+01	2.547000D+03	1.750000D+04	2.378000D-03	3.214017D+03
4.400000D+01	-1.738024D+01	-2.061608D+01	6.595308D-02	8.009524D+03
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	-2.190042D+01	0.0	1.831181D-01	3.938664D+03
7.050000D+02	0.0	-6.093644D-01	1.741049D+01	1.031600D+04
THEOF	AICF	BITF	BICF	DFW
THEOR	AICR	BITR	BICR	LFFW
1.805238D+01	1.113077D+00	-8.000000D-01	-8.000000D-01	1.536039D+03
1.906952D+01	4.270150D-01	-8.000000D-01	-8.000000D-01	-1.765014D+03
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.856095D+01	-2.736420D+00	2.179324D-01	2.799672D-01	8.961977D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
8.597169D+03	7.556887D+02	2.398635D+02	2.852719D+03	1.148220D+03
1.099213D+04	1.051618D+03	1.724726D+02	3.252546D+03	9.000275D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
2.330866D+04	-2.143262D+03	1.261819D+02	4.500570D+02	1.171665D+03
2.945283D+04	9.386780D+02	-1.659601D+04	-8.386989D+02	1.480516D+03
XR	L/DE	SHPTOT	WFF	NMLB
6.792580D+03	4.513829D+00	2.752182D+03	2.753182D+03	2.911235D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	6.090597D-02	6.480388D-03	7.518982D-01	-1.007139D-01
5.841923D-02	7.811548D-02	8.188619D-03	7.549031D-01	-1.029637D-01
MUF	VF	DFFR	DF	A0F
MUR	VR	DFRF		A0R
1.794926D-01	6.838476D+00	8.006051D-01	1.111938D+00	3.545630D+00
1.832904D-01	8.550825D+00	2.413965D-03		4.531191D+00
AIF	BIF	BETA0F	B180F	A270F
AIR	BIR	BETA0R	B180R	A270R
4.636891D+00	1.864642D+00	-1.265371D+00	8.017634D+00	7.403760D+00
5.288518D+00	1.461492D+00	-9.227009D-01	9.622617D+00	9.061550D+00
CAPVF	ALPHA F	BETAFW	ATIPF	BTPTF
CAPVR	ALPHAR	BETARW	ATIPR	BTIPR
1.418803D+02	-2.688770D+01	3.600000D+02	3.377566D+02	4.997764D+00
1.442172D+02	-2.636180D+01	3.600000D+02	3.409083D+02	5.486746D+00

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTF	CTFP	A90F	
RMTR	CIRP	A90RA	
5.146409D-01	5.678460D-02	1.778919D+00	
5.114618D-01	7.313666D-02	2.172561D+00	

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
1.435672D+01	1.186022D+03	2.785029D+03	3.015044D-02
1.849098D+01	1.499007D+03	2.786029D+03	5.276326D+02

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
5.439174D+02	1.499900D+04	1.092210D+05	1.032000D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-4.768848D-02	3.445356D-01	1.606789D-01	2.702992D-01
-2.548419D-03	-2.489143D-01	1.751452D-03	-3.452619D-01
3.850308D-02	-1.770531D-01	-2.544679D-02	5.216428D+00
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
4.644863D-03	-7.201699D-01	3.741313D-01	-9.670608D+00
-4.124435D-03	4.369312D-01	-1.870718D-05	-5.587819D-01
-9.131323D-01	-5.321237D-01	6.049751D-02	-1.237119D+02
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	NBETA
MW	MR	MDELR	MAI PHA
-3.849215D-03	1.239791D-01	4.569184D-01	2.033908D-01
-1.585272D-03	-1.265471D+00	-4.380672D-03	-2.147740D-01
1.859934D-02	-3.900731D-01	2.554193D-03	2.519853D+00
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
1.770740D-03	-1.051700D-01	1.296903D-01	8.035872D-02
-1.627658D-01	-8.465166D-02	9.951344D-01	-2.205164D+01
5.295478D-03	-1.793456D-01	-1.960052D-01	7.174357D-01
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
-1.491464D-05	-4.298324D-01	-2.903637D-02	-1.359312D-02
-1.914812D-02	1.951071D-01	3.985094D-01	-2.594203D+00
-1.339901D-03	8.180590D-04	-1.895422D-01	-1.815309D-01
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
-1.192038D-04	5.190909D-02	7.954738D-02	1.558676D-02
8.040772D-04	-2.814938D-01	1.457298D-02	1.089370D-01
2.484695D-03	-9.001833D-02	1.398343D-01	3.366285D-01

LONGITUDINAL

	U	WU	W	ALPHA	Q	THETAC
CTF	-0.466D-05	-0.328D-02	0.101D-03	0.137D-01	-0.171D-02	0.532D-01
CTR	0.650D-05	0.458D-02	0.866D-04	0.117D-01	0.160D-02	0.452D-01
CHF	0.156D-05	0.110D-02	0.942D-05	0.128D-02	-0.144D-03	0.582D-02
CHR	0.341D-05	0.240D-02	0.951D-05	0.129D-02	0.112D-03	0.586D-02
AIF	0.467D-03	0.329D+00	0.624D-03	0.845D-01	-0.833D-01	0.559D+00
AIR	0.608D-03	0.429D+00	0.548D-03	0.743D-01	-0.680D-01	0.532D+00
VFR	-0.523D-01	-0.369D+02	0.204D+00	0.277D-02	-0.361D+01	0.998D+02
VRR	-0.384D-01	-0.271D+02	0.175D+00	0.238D+02	0.335D+01	0.804D+02
LF			0.424D+02	0.575D+04		
DF			-0.475D+00	-0.644D+02		
MF			0.232D+03	0.315D+05		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.210D-05	-0.285D-03	0.295D-04	-0.568D-04	0.379D-02
CYR	0.289D-05	0.392D-03	0.533D-04	-0.163D-04	0.483D-02
B1F	0.110D-03	0.149D-01	-0.699D-01	-0.178D-01	0.105D+01
B1R	-0.106D-03	-0.143D-01	0.760D-01	-0.286D-02	0.105D+01
YF	-0.765D+02	-0.104D+05			
YR	-0.155D+03	-0.210D+05			
NF	0.103D+03	0.140D+05			
CTF					-0.113D-03
CTR					-0.229D-03

FORCE = 0.241446D+07

X	BICF	BICR	OMEGAF	OMEGAR
Z	0.123D+02	0.202D+02	0.0	0.0
M	0.524D+02	0.617D+02	0.0	0.0
Y	-0.726D+01	0.297D+01	0.0	0.0
L	-0.150D+01	0.378D+00	0.0	0.0
N	0.703D-01	-0.877D-01	0.0	0.0
	-0.566D+00	0.363D+00	0.0	0.0
CTF	-0.134D-01	0.168D-05	0.0	0.0
CTR	0.197D-02	-0.135D-01	0.0	0.0
CHF	-0.502D-02	0.115D-06	0.0	0.0
CHR	0.208D-03	-0.624D-02	0.0	0.0
AIF	-0.112D+01	0.682D-05	0.0	0.0
AIR	0.108D-01	-0.112D+01	0.0	0.0
VFR	-0.251D+02	-0.118D-01	0.0	0.0
VRR	0.415D+01	-0.248D+02	0.0	0.0
QF	-0.120D+02	0.136D-02	0.0	0.0
QR	0.156D+01	-0.119D+02	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELR	QFALPHA
	-0.893D-02	0.732D+00	0.108D+01	0.219D+01
	-0.172D-02	0.112D+01	-0.111D-01	-0.234D+00
	0.891D-01	-0.744D+00	-0.116D-01	0.121D+02
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELR	QRALPHA
	-0.153D-02	-0.162D+00	-0.125D+01	0.234D+01
	0.154D-02	0.438D+01	0.129D-01	0.209D+00
	0.672D-01	0.106D+01	-0.231D-01	0.910D+01

V	RC	GM	RHO	XF LM
FE	ALPHA	ALFF	THETA	LF LM
1.023000D+02	2.186000D+03	1.750000D+04	2.378000D-03	2.771246D+03
4.400000D+01	-1.227158D+01	-1.442553D+01	-1.267894D-03	8.409261D+03
VTF	CGF	BETAF	PSI	XR LM
VTR	CGL	PHI	GAMMA	LR LM
7.050000D+02	-2.190042D+01	0.0	1.589510D-01	3.166513D+03
7.050000D+02	0.0	-7.715412D-01	1.217318D+01	1.030861D+04
THEOF	AICF	B1IF	BICF	DFW
THEOR	AICR	B1IR	BICR	LEFW
1.843405D+01	5.401860D-01	1.600000D+00	1.600000D+00	1.867875D+03
1.911659D+01	1.384548D-02	1.600000D+00	1.600000D+00	-1.718904D+03
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.877532D+01	-2.865835D+00	1.660328D-01	8.938598D-02	9.128154D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
8.837298D+03	5.455695D+02	1.751557D+02	1.978179D+03	9.784435D+02
1.075799D+04	7.483139D+02	1.172767D+02	2.374503D+03	8.518636D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
2.425973D+04	-2.076638D+03	1.865884D+02	6.135334D+02	1.219473D+03
2.871271D+04	1.459850D+03	-1.852619D+04	-4.823128D+02	1.443313D+03
XR	L/DE	SHPTOT	WFF	NMLB
5.615415D+03	5.504415D+00	2.762786D+03	2.763786D+03	3.618216D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	ANTR	LAMDAR
5.841923D-02	6.244738D-02	6.744810D-03	7.794184D-01	-9.915933D-02
5.841923D-02	7.679851D-02	7.982848D-03	7.820887D-01	-9.898342D-02
MUF	VF	DFFR	DF	A0F
MUR	VR	DFRF		A0R
2.275947D-01	5.820573D+00	9.896198D-01	1.046168D+00	3.589791D+00
2.313431D-01	6.998071D+00	2.608044D-04		4.372533D+00
AIF	B1F	BETA0F	B180F	A270F
AIR	B1R	BETA0R	B180R	A270R
3.213491D+00	1.589007D+00	8.406446D-02	6.536330D+00	8.439265D+00
3.858351D+00	1.383091D+00	1.924834D-01	7.916712D+00	9.938309D+00
CAPVF	ALPHA F	BETAFW	ATIPF	BPTPF
CAPVR	ALPHA R	BETARW	ATIPR	BPTPR
1.727792D+02	-2.177214D+01	2.657290D-03	3.414419D+02	3.584895D+00
1.747643D+02	-2.105449D+01	2.614234D-03	3.445868D+02	4.098757D+00

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMIF	CTFP	A90F
RMTR	CTRP	A90RA
4.85076D-01	5.961859D-02	1.362897D+00
4.816484D-01	7.308431D-02	1.551109D+00

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
2.734975D+01	1.246823D+03	2.823663D+03	3.621671D-02
3.352708D+01	1.476840D+03	2.824663D+03	6.337925D+02

STABILITY NOT CALCULATED FOR THIS CASE. SKIPPING TO NEXT CASE

V	RC	GM	RH0	XF LW
FE	ALPHA	ALFF	THETA	LF LW
1.210000D+02	1.517000D+03	1.750000D+04	2.378000D-03	2.211434D+03
4.400000D+01	-8.364498D+00	-9.843372D+00	-1.248600D+00	8.539231D+03
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	-2.190042D+01	0.0	1.011634D-01	2.602930D+03
7.050000D+02	0.0	-9.887544D-01	7.106758D+00	1.015545D+04
THEOF	AICF	BIIF	BICF	DFW
THEOR	AICR	BITR	BICR	LFFW
1.842828D+01	1.761222D-01	2.800000D+00	2.800000D+00	2.369776D+03
1.920288D+01	-1.323203D-01	4.000000D+00	4.000000D+00	-1.398903D+03
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.881558D+01	-3.282161D+00	1.011910D-01	-1.034782D-03	9.159365D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
8.805904D+03	5.147436D+02	1.280769D+02	1.803227D+03	9.259778D+02
1.047348D+04	4.631835D+02	1.020121D+02	1.458176D+03	9.222381D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
2.371396D+04	-1.728754D+03	2.770249D+02	8.369156D+02	1.192038D+03
2.800636D+04	2.141069D+03	-1.851111D+04	4.957509D+02	1.407806D+03
XR	L/DE	SHPTOT	WFF	NMLB
4.539846D+03	6.419044D+00	2.699845D+03	2.700845D+03	4.445661D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	6.295961D-02	6.593070D-03	8.088332D-01	-9.591687D-02
5.841923D-02	7.422828D-02	7.786466D-03	8.098734D-01	-9.321123D-02
MUF	VF	DFFR	DFF	A0F
MUR	VR	DFRF		A0R
2.758984D-01	4.929949D+00	1.167150D+00	9.966169D-01	3.560430D+00
2.795146D-01	5.812477D+00	3.186393D-07		4.199092D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
2.927911D+00	1.505944D+00	1.873669D-01	6.107023D+00	9.332629D+00
2.369411D+00	1.495728D+00	1.325730D+00	6.126517D+00	1.074985D+01
CAPVF	ALPHA F	BETAFW	ATIPF	BPTPF
CAPVR	ALPHA R	BETARW	ATIPR	BPTPR
2.043617D+02	-1.786449D+01	4.505766D-02	3.450634D+02	3.292496D+00
2.059611D+02	-1.690816D+01	4.447473D-02	3.470049D+02	2.802019D+00

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CASE 14

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMIF	CTFP	A90F	
RMTR	CTRP	A90RA	
4.546338D-01	6.054003D-02	8.814692D-01	
4.518807D-01	7.199842D-02	1.039908D+00	

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	NFF	RP
4.369848D+01	1.235737D+03	2.795513D+03	4.326818D-02
5.196927D+01	1.459776D+03	2.796513D+03	7.571931D+02

STABILITY NOT CALCULATED FOR THIS CASE. SKIPPING TO NEXT CASE

CATALOG OF TRIM & STABILITY DERIVATIVE DATA

A-97 TRIM ANALYSIS (CH-46E)

GW = 17,500 lb CG = 20 in. aft

<u>ALTITUDE</u>	<u>AIRSPEED</u>	<u>CLIMB RATE</u>	<u>SIDESLIP</u>	<u>DERIVATIVES</u>
0 ft	50 kt	0 ft/min	-45 deg	
			-30	X
			-15	
			0	
			15	
			30	X
			45	
	95		-30	
			-20	X
			-10	
			0	
			10	
			20	X
			30	
	140		-10	X
			- 7	
			- 4	
			0	
			4	
			7	
			10	X

V	RC	GN	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
5.000000D+01	0.0	1.750000D+04	2.378000D-03	1.453912D+03
4.400000D+01	-5.962188D+00	-1.655936D+01	3.678033D+00	8.595044D+03
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	-2.190042D+01	-4.500000D+01	4.503581D+01	2.147327D+03
7.050000D+02	0.0	-9.653532D+00	0.0	1.080322D+04
THEOF	AICF	B1TF	BICF	DFW
THEOR	AICR	B1TR	BICR	LFFW
1.388047D+01	-1.124801D+00	-2.500000D+00	-2.500000D+00	4.892555D+02
1.545990D+01	1.209776D+00	-2.500000D+00	-2.500000D+00	-2.424695D+03
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.467019D+01	-1.501897D+00	-7.550495D-01	7.737880D-02	5.945881D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
8.697456D+03	5.855874D+02	5.182863D+01	2.119187D+03	3.108924D+02
1.098147D+04	8.532797D+02	-7.034113D+01	2.861439D+03	1.506580D+01
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.231461D+04	-2.462468D+03	2.805381D+03	-1.252467D+03	6.190230D+02
1.710183D+04	2.354172D+02	-1.448135D+04	4.736971D+03	8.596641D+02
XR	L/DE	SHPTOT	WFF	NMLB
3.386063D+03	2.537753D+00	1.578687D+03	1.579687D+03	3.165184D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	6.195925D-02	3.423767D-03	7.043023D-01	-4.418855D-02
5.841923D-02	7.825988D-02	4.754734D-03	7.083548D-01	-5.286445D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
1.176235D-01	1.131490D+01	8.821128D-01	9.128231D-01	3.290119D+00
1.182584D-01	1.385445D+01	2.789989D-01		4.309861D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
2.758439D+00	-2.121175D+00	4.439582D-01	5.988066D+00	4.613934D+00
3.237654D+00	3.339293D+00	9.938731D-01	7.475201D+00	6.329322D+00
CAPVF	ALPHA	BETAFW	AT1PF	BPTPF
CAPVR	ALPHAR	BETARW	AT1PR	BPTPR
8.526411D+01	-1.345293D+01	3.140994D+02	3.472963D+02	3.479709D+00
8.659685D+01	-1.568506D+01	3.144160D+02	3.502755D+02	4.651159D+00

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMIF	CTIF	A90F	
RMIR	CTRP	A90RA	
5.563160D-01	6.093573D-02	1.705491D+00	
5.504322D-01	7.659092D-02	2.344742D+00	

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
3.330294D+00	6.223533D+02	1.586203D+03	3.150195D-02
4.185890D+00	8.638500D+02	1.587203D+03	5.512841D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

V	RC	GM	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
5.000000D+01	0.0	1.750000D+04	2.378000D-03	7.930693D+02
4.400000D+01	-3.798771D-01	-8.695946D+00	2.744371D+00	7.716515D+03
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	-2.19042D+01	-3.000000D+01	2.988980D+01	1.835596D+03
7.050000D+02	0.0	-5.382281D+00	0.0	1.025557D+04
THEOF	AICF	B1TF	BICF	DFW
THEOR	AICR	B1TR	B1CR	LFFW
1.262352D+01	-8.972280D-01	-2.500000D+00	-2.500000D+00	3.280445D+02
1.492069D+01	1.463107D+00	-2.500000D+00	-2.500000D+00	-7.252703D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.377211D+01	-2.454751D+00	-7.773160D-01	1.700600D-01	5.249697D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
7.738630D+03	5.358855D+02	9.449381D-01	2.226410D+03	1.280848D+02
1.038374D+04	8.509223D+02	8.880699D+01	2.933308D+03	5.717069D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
9.255564D+03	-7.274293D+02	1.730691D+03	9.802086D+02	4.652529D+02
1.524242D+04	3.232287D+02	-5.468528D+03	4.825141D+03	7.661964D+02
XR	L'DE	SHPTOT	WFF	NMLB
1.289770D+03	2.370661D+00	1.331449D+03	1.332449D+03	3.752488D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	5.464371D-02	2.573277D-03	7.057333D-01	-3.505314D-02
5.841923D-02	7.412011D-02	4.237772D-03	7.091704D-01	-5.016808D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF	DF	AOR
1.184531D-01	1.024311D+01	1.252587D+00	9.151844D-01	2.774625D+00
1.190396D-01	1.314146D+01	1.461142D-01		4.024272D+00
A1F	B1F	BETAOF	B180F	A270F
A1R	B1R	BETAOR	B180R	A270R
3.226050D+00	-1.649511D+00	-4.927853D-01	5.954070D+00	3.737536D+00
3.653719D+00	3.201191D+00	3.290264D-01	7.615154D+00	5.890096D+00
CAPVF	ALPHAF	BETAFW	AT1FF	BPTPF
CAPVR	ALPHAR	BETARW	AT1PR	BPTPR
8.475359D+01	-9.829304D+00	3.296285D+02	3.533462D+02	3.623297D+00
8.681571D+01	-1.483243D+01	3.297937D+02	3.562738D+02	4.857704D+00

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMIF	CTFP	A90F	
RMIR	CTRP	A90RA	
5.559531D-01	5.470728D-02	1.224095D+00	
5.506142D-01	7.270826D-02	2.105724D+00	

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NNLB
DELHPR	RHPR	WFF	RP
2.989893D+00	4.682428D+02	1.338413D+03	3.732979D-02
3.973692D+00	7.701701D+02	1.339413D+03	6.532713D+02

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
5.439174D+02	1.499900D+04	1.092210D+05	1.032000D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-2.740494D-02	4.999556D-01	1.357933D-01	4.047597D-01
-2.079637D-03	9.805653D-01	5.823143D-02	-1.523213D-01
4.591810D-02	-6.915505D-02	5.840624D-03	3.363232D+00
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
-9.521938D-02	-3.855017D+00	6.687823D-01	-7.582510D+00
-1.193388D-02	-2.711458D-01	-7.599440D-01	-8.740867D-01
-7.670728D-01	-8.429496D-01	2.684561D-01	-5.618360D+01
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-3.767749D-04	-1.493899D-01	4.360677D-01	2.034498D-01
8.215267D-03	-1.349873D+00	2.707450D-02	6.017204D-01
1.662872D-02	-2.314788D-01	1.407539D-01	1.217957D+00
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
2.320464D-02	-1.446197D+00	2.304812D-02	8.330834D-02
-1.207162D-01	2.310667D-01	8.932775D-01	-8.841754D+00
-5.106156D-03	-1.260758D-01	-2.176097D-01	-3.739961D-01
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
2.110906D-03	-7.428947D-01	-2.040747D-02	4.557659D-02
-2.754181D-03	1.645504D-01	3.719080D-01	-2.017277D-01
-1.687955D-03	-2.706551D-02	-1.786835D-01	-1.236328D-01
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
9.883414D-04	-1.071900D-02	3.427602D-02	-1.656968D-02
-1.986892D-03	-1.453556D-01	1.030011D-02	-1.455283D-01
1.768536D-03	-3.855242D-02	1.235490D-01	1.295350D-01

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	0.425D-05	0.300D-02	0.906D-04	0.663D-02	-0.168D-02	0.449D-01
CTR	0.106D-04	0.748D-02	0.730D-04	0.535D-02	0.177D-02	0.321D-01
CHF	0.145D-05	0.102D-02	0.675D-05	0.494D-03	-0.263D-03	0.373D-02
CHR	0.296D-05	0.209D-02	0.668D-05	0.489D-03	-0.221D-04	0.366D-02
AIF	0.500D-03	0.352D+00	0.395D-03	0.289D-01	-0.859D-01	0.330D+00
AIR	0.683D-03	0.481D+00	0.329D-03	0.241D-01	-0.394D-01	0.294D+00
VFR	-0.836D-01	-0.590D+02	0.295D+00	0.216D+02	-0.582D+01	0.138D+03
VRR	-0.819D-01	-0.577D+02	0.241D+00	0.176D+02	0.620D+01	0.845D+02
LF			0.219D+02	0.160D+04		
DF			0.536D+00	0.392D+02		
MF			0.121D+03	0.889D+04		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.115D-05	-0.841D-04	-0.137D-03	-0.357D-04	0.330D-02
CVR	0.201D-05	0.147D-03	0.191D-03	-0.686D-05	0.445D-02
BIF	0.270D-03	0.198D-01	-0.778D-01	-0.140D-01	0.882D+00
BIR	-0.377D-03	-0.276D-01	0.474D-01	-0.870D-03	0.890D+00
YF	-0.580D+02	-0.425D+04			
LF	0.449D+02	0.329D+04			
NF	-0.205D+03	-0.150D+05			
CTF					0.389D-02
CTR					-0.532D-02

FORCE = 0.241446D+07

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X	BICF	BICR	OMEGAF	OMEGAR
Z	0.119D+02	0.188D+02	0.0	0.0
M	0.224D+02	0.312D+02	0.0	0.0
Y	-0.439D+01	0.109D+01	0.0	0.0
L	-0.233D-02	-0.267D+00	0.0	0.0
N	-0.927D-01	-0.103D+00	0.0	0.0
	0.646D-01	0.150D-01	0.0	0.0
CTF	-0.674D-02	0.249D-03	0.0	0.0
CTR	0.214D-02	-0.681D-02	0.0	0.0
CHF	-0.378D-02	0.181D-04	0.0	0.0
CHR	0.189D-03	-0.508D-02	0.0	0.0
AIF	-0.902D+00	0.957D-03	0.0	0.0
AIR	0.739D-02	-0.922D+00	0.0	0.0
VFR	-0.209D+02	0.836D+00	0.0	0.0
VRR	0.748D+01	-0.198D+02	0.0	0.0
QF	0.104D+01	-0.397D-01	0.0	0.0
QR	-0.136D+00	0.646D+00	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELR	QFALPHA
	-0.233D-02	0.817D-01	0.373D+00	0.768D+00
	0.607D-03	0.252D+01	-0.217D-01	0.445D-01
	-0.136D-01	-0.201D+00	-0.323D-01	-0.999D+00
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELR	QRALPHA
	-0.439D-02	0.736D-01	-0.587D+00	0.123D+01
	0.332D-02	0.255D+01	0.914D-03	0.243D+00
	-0.304D-02	0.383D+00	0.529D-02	-0.223D+00

V	RC	GW	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
5.000000D+01	0.0	1.750000D+04	2.378000D-03	5.015908D+02
4.400000D+01	1.580614D+00	-5.952861D+00	2.311344D+00	7.390013D+03
VTF	CGF	DEIAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	-2.190042D+01	-1.500000D+01	1.490391D+01	1.835499D+03
7.050000D+02	0.0	-2.695411D+00	0.0	1.002789D+04
THEOF	AICF	B1TF	B1CF	DFW
THEOR	AICR	B1TR	B1CR	LFFW
1.199481D+01	6.679005D-01	-2.500000D+00	-2.500000D+00	3.715605D+02
1.475526D+01	1.739423D+00	-2.500000D+00	-2.500000D+00	-1.047492D+02
THEIAC	DELTAB	DELTAS	DELTAR	DELTAC
1.337503D+01	-3.051992D+00	-3.621982D-01	5.135415D-01	4.941886D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
7.388008D+03	5.303046D+02	1.440847D+02	2.329856D+03	8.287792D+02
1.015850D+04	8.558879D+02	2.391784D+02	2.950423D+03	1.095901D+03
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
7.867949D+03	-9.446043D+01	9.222899D+02	1.347666D+03	3.955012D+02
1.472925D+04	3.743085D+02	-2.475781D+03	8.064784D+02	7.404009D+02
XR	L/DE	SHPTOT	NFF	NMLB
6.000294D+02	2.349197D+00	1.235902D+03	1.236902D+03	4.042357D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	5.234142D-02	2.187486D-03	7.077198D-01	-3.063200D-02
5.841923D-02	7.201757D-02	4.095099D-03	7.098984D-01	-5.056930D-02
MUF	VF	DFFR	DFP	AOF
MUR	VR	DFRF		AOR
1.187174D-01	9.849443D+00	1.535719D+00	9.486873D-01	2.619838D+00
1.192835D-01	1.281864D+01	3.952783D-02		3.909061D+00
A1F	B1F	BETAOF	B180F	A270F
A1R	B1R	BETAOR	B180R	A270R
4.005684D+00	3.108730D-01	-1.421987D+00	6.581409D+00	3.426959D+00
4.168996D+00	2.964606D+00	-3.302293D-01	8.012570D+00	5.721548D+00
CAPVF	ALPHA F	BETA F W	ATIPF	BPTPF
CAPVR	ALPHA R	BETA R W	ATIPR	BPTPR
8.451593D+01	-7.988545D+00	3.448677D+02	-3.913702D+00	4.017729D+00
8.713870D+01	-1.518855D+01	3.449412D+02	-1.250390D+00	5.115606D+00

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMTR	CTFP	A90F
5.554630D-01	CIRP	A90RA
5.510344D-01	5.239249D-02	1.031977D+00
	7.109410D-02	2.022892D+00

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	NFF	RP
2.863384D+00	3.983645D+02	1.242651D+03	4.020421D-02
3.885475D+00	7.442864D+02	1.243651D+03	7.035736D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

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V	RC	GN	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
5.000000D+01	0.0	1.750000D+04	2.378000D-03	4.222679D+02
4.400000D+01	2.025051D+00	-5.630086D+00	2.094587D+00	7.392091D+03
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	-2.190042D+01	0.0	-5.169504D-03	1.863289D+03
7.050000D+02	0.0	-1.475711D-01	0.0	1.008261D+04
THEOF	AICF	B1TF	B1CF	DFW
THEOR	AICR	B1TR	B1CR	LFFW
1.193644D+01	1.607063D+00	-2.500000D+00	-2.500000D+00	3.708094D+02
1.479532D+01	1.138003D+00	-2.500000D+00	-2.500000D+00	-1.439740D+02
THEIAC	DELIAB	DELTAS	DELTAR	DELTAC
1.336588D+01	-3.222907D+00	1.574054D-01	5.460056D-01	4.934791D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
7.384206D+03	5.429776D+02	2.136079D+02	2.428287D+03	1.206006D+03
1.021392D+04	8.981688D+02	2.126302D+02	2.885791D+03	9.046591D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
7.712029D+03	-1.307810D+02	4.445694D+01	1.252740D+02	3.876635D+02
1.503328D+04	3.756453D+02	-2.067822D+03	1.903100D+02	7.556836D+02
XR	L/DE	SHPTOT	WFF	NMLB
4.132353D+02	2.277271D+00	1.243347D+03	1.244347D+03	4.018172D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	5.256959D-02	2.144136D-03	7.081048D-01	-2.958461D-02
5.841923D-02	7.278821D-02	4.179626D-03	7.097344D-01	-5.132420D-02
MUF	VF	DFFR	DFF	A0F
MUR	VR	DFRF		A0R
1.187650D-01	9.870747D+00	1.621045D+00	9.947254D-01	2.629862D+00
1.193317D-01	1.285659D+01	2.714511D-41		4.130093D+00
A1F	B1F	BETA0F	B160F	A270F
A1R	B1R	BETA0R	B180R	A270R
3.945818D+00	1.958518D+00	-1.347370D+00	6.532719D+00	3.466428D+00
4.690767D+00	1.469015D+00	-8.481179D-01	8.715992D+00	5.795106D+00
CAPVF	ALPHA F	BETA F W	ATIPF	BPTPF
CAPVR	ALPHA R	BETA R W	ATIPR	BPTPR
8.444700D+01	-7.474949D+00	3.600000D+72	-3.529131D+00	4.405142D+00
8.730225D+01	-1.549569D+01	3.600000 J2	-2.841822D-01	4.915414D+00

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMIF	CTFP	A90F	
RMTR	CTRP	A90RA	
5.542457D-01	5.240723D-02	1.001097D+00	
5.526140D-01	7.148199D-02	2.289370D+00	

3

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	NFF	RP
2.864189D+00	3.905277D+02	1.250118D+03	3.996426D-02
3.906674D+00	7.595903D+02	1.251118D+03	6.993745D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

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V	RC	GN	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
5.000000D+01	0.0	1.750000D+04	2.378000D-03	4.599449D+02
4.400000D+01	1.813556D+00	-5.725703D+00	2.417250D+00	7.410682D+03
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	-2.190042D+01	1.500000D+01	-1.491149D+01	1.843932D+03
7.050000D+02	0.0	2.204611D+00	0.0	1.003892D+04
THEOF	AICF	BITF	BICF	DEFW
THEOR	AICR	BITR	BICR	LEFW
1.212011D+01	2.408537D+00	-2.500000D+00	-2.500000D+00	3.536867D+02
1.465427D+01	9.705261D-02	-2.500000D+00	-2.500000D+00	-1.314078D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.338719D+01	-2.874929D+00	7.695712D-01	4.734818D-01	4.951307D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
7.404876D+03	5.454932D+02	2.698082D+02	2.500693D+03	1.518170D+03
1.017304D+04	8.301743D+02	1.418218D+02	2.715691D+03	7.155745D+02
QF	LFZ	YFY	LF	RHFF
QR	DFX	MF	NF	RHPR
8.032529D+03	-1.201488D+02	-7.988130D+02	-1.225266D+03	4.037742D+02
1.449530D+04	3.576682D+02	-2.427045D+03	-8.609249D+02	7.286409D+02
XR	L/DE	SHPTOT	WFF	NMLB
5.426598D+02	2.338318D+00	1.232415D+03	1.233415D+03	4.053785D-02
SIGOF	CISF	CPSF	AMTF	LAMDAF
SIGOR	CISR	CPSR	AMTR	LAMDAR
5.841923D-02	5.283752D-02	2.233243D-03	7.075733D-01	-3.021158D-02
5.841923D-02	7.227751D-02	4.030055D-03	7.089968D-01	-5.035299D-02
MUF	VF	DFFR	DF	A0F
MUR	VR	DFRF		A0R
1.187790D-01	9.880386D+00	1.546757D+00	9.468605D-01	2.638218D+00
1.193254D-01	1.283974D+01	3.954883D-02		3.902925D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
3.279668D+00	3.440505D+00	-6.401676D-01	5.879193D+00	3.588275D+00
4.564024D+00	-2.441338D-02	-7.014385D-01	8.403501D+00	5.583224D+00
CAPVF	ALPHA	BETAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
8.451411D+01	-7.764698D+00	1.512256D+01	-4.406776D+00	4.753240D+00
8.712196D+01	-1.507328D+01	1.505167D+01	-6.224200D-01	4.564088D+00

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CASE 18

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTF	CIFP	A90F	
RMTR	CTRP	A90RA	
5.524506D-01	5.253903D-02	9.962940D-01	
5.542078D-01	7.117228D-02	2.050191D+00	

3

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
2.871393D+00	4.066456D+02	1.239176D+03	4.031685D-02
3.889747D+00	7.325306D+02	1.240176D+03	7.055449D+02

STABILITY NOT CALCULATED FOR THIS CASE. SKIPPING TO NEXT CASE

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V	RC	GW	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
5.000000D+01	0.0	1.750000D+04	2.378000D-03	7.054984D+02
4.400000D+01	2.151998D-02	-8.201293D+00	2.994330D+00	7.680083D+03
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	-2.190042D+01	3.000000D+01	-2.986624D+01	1.818872D+03
7.050000D+02	0.0	5.103386D+00	0.0	1.014271D+04
THEOF	AICF	BITF	BICF	DFW
THEOR	AICR	BITR	BICR	LFFW
1.277731D+01	3.178536D+00	-2.500000D+00	-2.500000D+00	2.534095D+02
1.467937D+01	-1.277157D-01	-2.500000D+00	-2.500000D+00	-5.670421D+02
THEIAC	DELTAB	DELTAS	DELTAR	DELTAC
1.372834D+01	-2.145583D+00	1.100618D+00	5.517449D-01	5.215768D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
7.691433D+03	5.685710D+02	3.239357D+02	2.567863D+03	1.702776D+03
1.027406D+04	7.915443D+02	1.955547D+02	2.503633D+03	8.207993D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
9.543025D+03	-5.669468D+02	-1.678271D+03	-8.161879D+02	4.797029D+02
1.456849D+04	2.536224D+02	-5.922941D+03	-4.077380D+03	7.323200D+02
XR	L/DE	SHPTOI	WFF	NMLB
1.168377D+03	2.372310D+00	1.312023D+03	1.313023D+03	3.808007D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	5.489962D-02	2.653199D-03	7.065864D-01	-3.425407D-02
5.841923D-02	7.287841D-02	4.050404D-03	7.075609D-01	-4.943957D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
1.185586D-01	1.019685D+01	1.269584D+00	9.103175D-01	2.831704D+00
1.191181D-01	1.302101D+01	1.465429D-01		3.947743D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
2.204229D+00	4.494999D+00	5.711920D-01	4.982257D+00	3.998110D+00
4.186932D+00	-8.934858D-01	-3.098556D-01	8.065640D+00	5.598697D+00
CAPVF	ALPHA F	BETAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
8.474018D+01	-9.476270D+00	3.034221D+01	-7.274251D+00	5.006360D+00
8.676950D+01	-1.457221D+01	3.018482D+01	-2.791548D+00	4.281205D+00

HD-A134 323

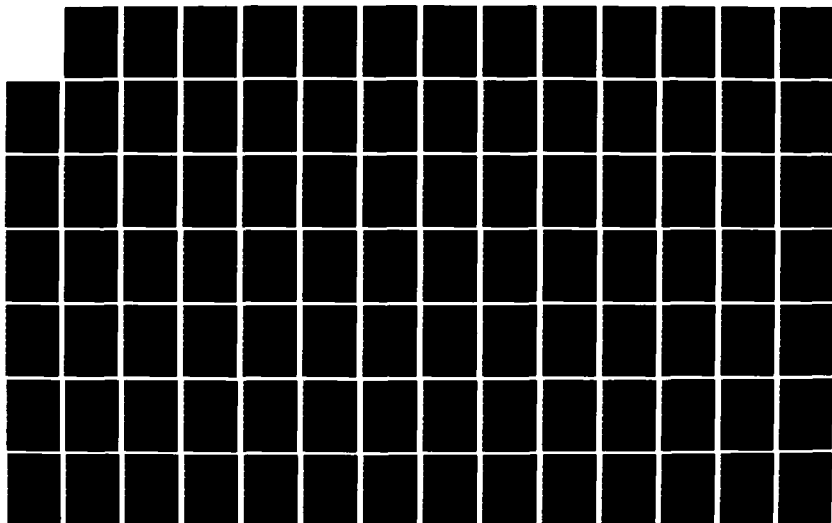
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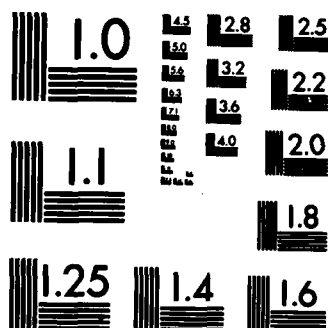
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UNCLASSIFIED

F/G 1/2

NL





MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

CASE 14

PAGE 4

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTF	CTFP	A90F	
RMTF	CTRP	A90RA	
5.507326D-01	5.444899D-02	1.194448D+00	
5.547800D-01	7.190813D-02	2.095919D+00	

3

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
2.975777D+00	4.826786D+02	1.318929D+03	3.788084D-02
3.929963D+00	7.362500D+02	1.319929D+03	6.629146D+02

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
5.439174D+02	1.499900D+04	1.092210D+05	1.032000D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-2.266616D-02	4.186034D-01	9.109801D-02	4.201121D-01
-2.246563D-03	1.089490D+00	-5.451137D-02	-1.645505D-01
4.035319D-02	-5.817758D-02	-5.678774D-02	2.935687D+00
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
-1.053523D-01	-3.206519D+00	6.916350D-01	-7.573675D+00
1.981457D-02	-1.871326D-01	7.430390D-01	1.451327D+00
-7.549567D-01	-5.659043D-01	-2.265319D-01	-5.529714D+01
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-5.514559D-04	-1.864902D-01	4.396381D-01	2.010622D-01
-1.067063D-02	-1.222459D+00	-3.070237D-02	-7.815749D-01
1.734002D-02	-2.777527D-01	-1.382215D-01	1.270077D+00
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
-2.751007D-02	-1.498854D+00	1.805617D-01	-5.843050D-03
-1.088029D-01	-1.288955D-01	8.747950D-01	-7.969319D+00
1.944505D-02	-2.502451D-01	-2.573397D-01	1.424262D+00
LU	LP	LDELB	LDELTAC
LV	LQ	LELS	LBETA
LW	LR	LDELR	LALPHA
-3.642625D-03	-8.302169D-01	2.747563D-02	-4.541192D-02
-9.464867D-04	7.897296D-02	3.677524D-01	-6.932584D-02
5.900652D-03	-6.725353D-02	-1.943067D-01	4.321959D-01
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
-3.510392D-04	5.535704D-02	3.207736D-02	1.966997D-02
-1.988850D-03	-1.586131D-01	8.923130D-03	-1.456742D-01
-6.078117D-04	-4.000283D-02	1.241681D-01	-4.451944D-02

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	0.422D-05	0.298D-02	0.902D-04	0.661D-02	0.150D-02	0.447D-01
CTR	0.105D-04	0.743D-02	0.721D-04	0.528D-02	0.158D-02	0.320D-01
CHF	0.149D-05	0.105D-02	0.722D-05	0.529D-03	0.255D-03	0.405D-02
CHR	0.282D-05	0.199D-02	0.619D-05	0.453D-03	0.499D-04	0.330D-02
ALF	0.707D-03	0.499D+00	0.436D-03	0.320D-01	0.481D-01	0.332D+00
AIR	0.562D-03	0.396D+00	0.306D-03	0.224D-01	0.778D-01	0.293D+00
VFR	-0.841D-01	-0.593D+02	0.294D+00	0.215D+02	0.525D+01	0.138D+03
VRR	-0.814D-01	-0.574D+02	0.237D+00	0.174D+02	0.562D+01	0.845D+02
LF			0.184D+02	0.135D+04		
DF			0.317D+01	0.232D+03		
MF			0.181D+03	0.132D+05		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.137D-05	-0.101D-03	-0.131D-03	-0.579D-04	0.315D-02
CYR	0.245D-05	0.179D-03	0.204D-03	-0.177D-05	0.450D-02
B1F	0.153D-03	0.112D-01	-0.417D-01	-0.114D-01	0.891D+00
B1R	-0.262D-03	-0.192D-01	0.848D-01	-0.612D-03	0.892D+00
YF	-0.500D+02	-0.366D+04			
LF	0.905D+02	0.663D+04			
NF	-0.228D+03	-0.167D+05			
CTF					-0.401D-02
CTR					0.518D-02

FORCE = 0.241446D+07

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X	BICF	BICR	OMEGAF	OMEGAR
Z	0.121D+02	0.182D+02	0.0	0.0
H	0.221D+02	0.318D+02	0.0	0.0
Y	-0.438D+01	0.117D+01	0.0	0.0
L	-0.108D+01	0.641D+00	0.0	0.0
N	-0.239D+00	0.294D+00	0.0	0.0
	-0.705D-01	-0.776D-01	0.0	0.0
CTF	-0.667D-02	0.255D-03	0.0	0.0
CTR	0.215D-02	-0.694D-02	0.0	0.0
CHF	-0.382D-02	0.201D-04	0.0	0.0
CHR	0.178D-03	-0.497D-02	0.0	0.0
AIF	-0.915D+00	0.996D-03	0.0	0.0
AIR	0.734D-02	-0.908D+00	0.0	0.0
VFR	-0.206D+02	0.859D+00	0.0	0.0
VRR	0.754D+01	-0.202D+02	0.0	0.0
QF	0.969D+00	-0.341D-01	0.0	0.0
QR	-0.188D+00	0.604D+00	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELR	QFALPHA
	-0.234D-02	0.979D+00	0.386D+00	0.792D+00
	-0.359D-03	0.252D+01	0.112D-01	-0.263D-01
	-0.119D-01	-0.539D-01	0.169D-01	-0.870D+00
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELR	QRALPHA
	-0.458D-02	-0.716D+00	-0.561D+00	0.119D+01
	-0.363D-02	0.254D+01	0.127D-01	-0.266D+00
	-0.458D-02	0.337D+00	-0.333D-01	-0.335D+00

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V	RC	GM	RHO	XF LM
FE	ALPHA	ALFF	THETA	LF LM
5.000000D+01	0.0	1.750000D+04	2.378000D-03	1.334647D+03
4.400000D+01	-5.360816D+00	-1.574247D+01	4.054633D+00	8.518658D+03
VTF	CGF	BETAF	PSI	XR LM
VTR	CGL	PHI	GAMMA	LR LM
7.050000D+02	-2.190042D+01	4.500000D+01	-4.498503D+01	2.103086D+03
7.050000D+02	0.0	9.349023D+00	0.0	1.053884D+04
THEOF	AICF	B1IF	B1CF	DFW
THEOR	AICR	B1IR	B1CR	LFFW
1.391896D+01	2.743653D+00	-2.500000D+00	-2.500000D+00	3.197048D+02
1.513909D+01	-6.631640D-01	-2.500000D+00	-2.500000D+00	-2.071088D+03
THEIAC	DELTAB	DELTAS	DELTAR	DELTAC
1.452902D+01	-1.220751D+00	1.137194D+00	3.367750D-01	5.836453D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
8.600671D+03	6.142257D+02	2.175361D+02	2.585915D+03	1.082125D+03
1.072031D+04	7.516386D+02	1.960069D+02	2.242544D+03	7.182212D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.238371D+04	-2.091898D+03	-2.851557D+03	5.299259D+02	6.224965D+02
1.609491D+04	1.248101D+02	-1.581838D+04	-3.216201D+03	8.090489D+02
XR	L/DE	SHPTOT	WFF	NMLB
3.172802D+03	2.572738D+00	1.531545D+03	1.532545D+03	3.262546D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	6.076095D-02	3.442979D-03	7.062400D-01	-4.306167D-02
5.841923D-02	7.545884D-02	4.474785D-03	7.052605D-01	-5.163771D-02
MUF	VF	DFFR	DFF	AOF
MUR	VR	DFRF		AOR
1.177880D-01	1.120199D+01	8.943072D-01	9.045006D-01	3.239242D+00
1.183967D-01	1.357271D+01	2.802879D-01		4.121776D+00
AIF	B1F	BETAOF	B180F	A270F
AIR	B1R	BETAOR	B180R	A270R
1.666341D+00	4.239278D+00	1.536230D+00	4.848331D+00	4.732619D+00
3.384183D+00	-1.784098D+00	6.646310D-01	7.435245D+00	5.870885D+00
CAPVF	ALPHA F	BETA F W	ATIPF	BPIPF
CAPVR	ALPHA R	BETA R W	ATIPR	BPIPR
8.522113D+01	-1.298924D+01	4.584891D+01	3.468055D+02	4.555016D+00
8.653514D+01	-1.529611D+01	4.554630D+01	3.510234D+02	3.825664D+00

PAGE 4

CASE 19

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMTF	CTFP	A90F
RMTR	CTRP	A90RA
5.510523D-01	6.039418D-02	1.608440D+00
5.554362D-01	7.471650D-02	2.285410D+00

3

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	NFF	RP
3.300696D+00	6.257972D+02	1.538930D+03	3.246902D-02
4.083448D+00	8.131323D+02	1.539930D+03	5.682078D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

PAGE 3

CASE 20

V	RC	GM	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
9.500000D+01	0.0	1.750000D+04	2.378000D-03	2.179489D+03
4.400000D+01	-1.152165D+01	-1.407859D+01	1.701722D-01	8.642337D+03
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	-2.190042D+01	-3.000000D+01	3.147752D+01	2.401328D+03
7.050000D+02	0.0	-1.982546D+01	0.0	1.057573D+04
THEOF	AICF	BITF	BICF	DFW
THEOR	AICR	BITR	BICR	LEFW
1.728115D+01	-5.169999D+00	-6.000000D-01	-6.000000D-01	1.730262D+03
1.750080D+01	1.667385D+00	-6.000000D-01	-6.000000D-01	-2.968666D+03
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.739098D+01	-2.174994D+00	-2.284605D+00	-6.158282D-01	8.055020D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
8.886829D+03	6.814972D+02	-4.065016D+02	2.257953D+03	-1.514627D+03
1.080031D+04	9.827510D+02	-7.899493D+01	3.297341D+03	1.788088D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
2.108059D+04	-3.254445D+03	6.26451D+03	3.638036D+03	1.059666D+03
2.294095D+04	1.102440D+03	-2.300107D+04	1.120565D+04	1.153182D+03
XR	L/DE	SHPTOT	WFF	NMLB
5.050759D+03	6.081897D+00	2.312848D+03	2.313848D+03	4.105715D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	6.278576D-02	5.860930D-03	7.642511D-01	-8.142412D-02
5.841923D-02	7.700012D-02	6.378156D-03	7.744184D-01	-8.174989D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
2.162104D-01	6.285635D+00	9.091607D-01	9.280299D-01	3.582996D+00
2.187158D-01	7.556748D+00	1.354747D-01		4.345546D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
1.862425D+00	-4.005227D+00	1.494543D+00	5.229484D+00	7.551972D+00
4.455608D+00	2.996370D+00	-4.355372D-01	8.527563D+00	9.105256D+00
CAPVF	ALPHAF	BETAFW	ATIPF	BPIPF
CAPVR	ALPHAR	BETARW	ATIPR	BPIPR
1.607715D+02	-1.853936D+01	3.287820D+02	3.408408D+02	4.417066D+00
1.621224D+02	-1.799188D+01	3.291789D+02	3.459340D+02	5.369421D+00

PAGE 4

CASE 20

XFF	ZFF	NFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTF	CTFP	A90F	
RMTR	CTRP	A90RA	
4.951689D-01	6.127102D-02	1.452405D+00	
4.872295D-01	7.497806D-02	1.474255D+00	

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
2.307487D+01	1.082741D+03	2.364160D+03	4.016642D-02
2.823699D+01	1.181419D+03	2.365160D+03	7.029124D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

V	RC	GM	RHO	XF LM
FE	ALPHA	ALFF	THEIA	LF LM
9.500000D+01	0.0	1.750000D+04	2.378000D-03	1.325947D+03
4.400000D+01	-4.254054D+00	-6.350808D+00	3.158320D-01	7.713865D+03
VTF	CGF	BEIAF	PSI	XR LM
VTR	CGL	PHI	GAMMA	LR LM
7.050000D+02	-2.190042D+01	-2.000000D+01	2.037670D+01	1.549624D+03
7.050000D+02	0.0	-1.253085D+01	0.0	9.754548D+03
THEOF	AICF	BITF	BICF	DFW
THEOR	AICR	BITR	BICR	LFFW
1.508355D+01	-4.044979D+00	3.000000D-01	3.000000D-01	1.318720D+03
1.570260D+01	1.528835D+00	3.000000D-01	3.000000D-01	-4.640188D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.539308D+01	-2.628363D+00	-1.891410D+00	-4.127765D-01	6.506261D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
7.813840D+03	4.535900D+02	-3.388243D+02	1.602042D+03	-1.349174D+03
9.853176D+03	6.837199D+02	7.187542D+01	2.422731D+03	7.774599D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.457214D+04	-5.605618D+02	4.213057D+03	4.834769D+03	7.325035D+02
1.661747D+04	1.280666D+03	-1.148835D+04	8.023764D+03	8.353168D+02
XR	L/DE	SHPTOT	WFF	NMLB
2.669563D+03	5.742384D+00	1.667820D+03	1.668820D+03	5.692644D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	5.556534D-02	4.051419D-03	7.687864D-01	-5.942812D-02
5.841923D-02	6.993037D-02	4.620071D-03	7.748675D-01	-6.147893D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
2.218312D-01	5.573639D+00	1.250248D+00	8.873952D-01	2.975353D+00
2.237253D-01	6.939828D+00	6.733052D-02		3.789881D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
1.670452D+00	-2.963331D+00	1.062213D+00	4.425350D+00	6.086490D+00
3.253890D+00	2.550319D+00	2.265860D-01	6.761424D+00	7.681602D+00
CAPVF	ALPHAF	BETAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
1.605538D+02	-1.307560D+01	3.395102D+02	3.479164D+02	3.401726D+00
1.618727D+02	-1.299611D+01	3.396913D+02	3.519998D+02	4.134239D+00

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMIF	CTFF	A98F
RMTR	CTRP	A98RA
4.918996D-01	5.468849D-02	8.498895D-01
4.854205D-01	6.915619D-02	1.016932D+00

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
2.059586D+01	7.530993D+02	1.714461D+03	5.537871D-02
2.604445D+01	8.613613D+02	1.715461D+03	9.691275D+02

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IY	IZZ
5.439174D+02	1.499900D+04	1.092210D+05	1.032000D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-5.006396D-02	4.379415D-01	1.803306D-01	5.509603D-01
4.548878D-03	3.34885D-01	1.013892D-01	6.844336D-01
5.397107D-02	-7.188935D-02	3.519012D-02	8.120600D+00
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
5.832432D-03	-1.605416D+00	5.842479D-01	-9.701522D+00
-5.823679D-02	-2.519882D-01	-1.184916D+00	-8.762429D+00
-9.092442D-01	-1.051183D+00	3.343301D-01	-1.368068D+02
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-3.834677D-03	1.832257D-01	4.870590D-01	2.326265D-01
5.086151D-03	-1.487106D+00	3.271088D-02	7.652728D-01
2.064021D-02	-2.334885D-01	1.933614D-01	3.105568D+00
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
4.923142D-02	-9.235161D-01	-8.920011D-02	-8.234124D-02
-1.499456D-01	4.595693D-01	8.541350D-01	-2.256112D+01
-6.298713D-02	-3.346467D-02	-1.965137D-01	-9.477174D+00
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
3.833510D-03	-5.444120D-01	-4.360532D-02	-7.423101D-04
-3.680344D-03	2.113065D-01	3.595207D-01	-5.537522D-01
-1.230868D-02	3.706870D-03	-1.664880D-01	-1.851990D+00
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
-2.242733D-04	-4.320644D-02	3.308055D-02	-2.248527D-02
-5.336871D-03	-1.485753D-01	1.141842D-02	-8.029966D-01
2.098543D-03	-4.584337D-02	1.213033D-01	3.157511D-01

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	-0.882D-05	-0.622D-02	0.105D-03	0.158D-01	-0.191D-02	0.554D-01
CTR	0.267D-05	0.188D-02	0.855D-04	0.129D-01	0.198D-02	0.427D-01
CHF	0.888D-06	0.626D-03	0.639D-05	0.961D-03	-0.177D-03	0.424D-02
CHR	0.212D-05	0.150D-02	0.739D-05	0.111D-02	0.256D-04	0.487D-02
ALF	0.435D-03	0.307D+00	0.786D-03	0.118D+00	-0.942D-01	0.684D+00
ALR	0.472D-03	0.333D+00	0.636D-03	0.957D-01	-0.436D-01	0.609D+00
VRR	-0.467D-01	-0.329D+02	0.183D+00	0.275D+02	-0.342D+01	0.945D+02
VFR	-0.340D-01	-0.240D+02	0.148D+00	0.222D+02	0.347D+01	0.706D+02
LF			0.343D+02	0.517D+04		
DF			0.482D+01	0.726D+03		
MF			0.319D+03	0.480D+05		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.163D-05	-0.245D-03	-0.744D-04	-0.155D-04	0.317D-02
CYR	0.199D-05	0.299D-03	0.137D-03	-0.618D-05	0.419D-02
BIF	-0.206D-03	-0.310D-01	-0.746D-01	-0.160D-01	0.985D+00
BIR	0.224D-04	0.337D-02	0.546D-01	0.480D-04	0.944D+00
YF	-0.728D+02	-0.110D+05			
LF	0.401D+02	0.603D+04			
NF	-0.539D+03	-0.810D+05			
CTF					0.547D-02
CTR					-0.723D-02

FORCE = 0.241446D+07

X	BICF	BICR	OMEGAF	OMEGAR
Z	0.778D+01	0.156D+02	0.0	0.0
M	0.563D+02	0.711D+02	0.0	0.0
Y	-0.857D+01	0.378D+01	0.0	0.0
L	0.239D+01	-0.601D+00	0.0	0.0
N	0.364D+00	-0.109D+00	0.0	0.0
	0.179D+00	0.839D-01	0.0	0.0
CTF	-0.158D-01	-0.625D-06	0.0	0.0
CTR	0.346D-02	-0.157D-01	0.0	0.0
CHF	-0.431D-02	-0.503D-07	0.0	0.0
CHR	0.292D-03	-0.550D-02	0.0	0.0
AIF	-0.107D+01	-0.208D-04	0.0	0.0
AIR	0.234D-01	-0.108D+01	0.0	0.0
VFR	-0.269D+02	0.874D-02	0.0	0.0
VRR	0.621D+01	-0.264D+02	0.0	0.0
QF	-0.457D+01	0.346D-03	0.0	0.0
QR	0.202D+00	-0.126D+01	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFM	QFR	QFDELR	QFALPHA
	-0.571D-02	-0.117D+01	0.641D+00	0.131D+01
	0.245D-02	0.135D+01	0.376D-01	0.368D+00
	0.308D-01	-0.624D+00	0.416D-01	0.464D+01
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELR	QRALPHA
	-0.499D-02	0.233D+00	-0.642D+00	0.126D+01
	0.159D-02	0.271D+01	0.144D-01	0.239D+00
	0.536D-02	0.480D+00	-0.324D-01	0.807D+00

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V	RC	GM	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
9.500000D+01	0.0	1.750000D+04	2.370000D-03	9.559129D+02
4.400000D+01	-5.229570D-01	-2.524271D+00	5.68599D-01	7.553570D+03
VTF	CGF	DETA	PSI	XR LW
VTR	GGL	PHI	GAMMA	LR LW
7.050000D+02	-2.190042D+01	-1.000000D+01	9.996884D+00	1.202550D+03
7.050000D+02	0.0	-6.236632D+00	0.0	9.813653D+03
THEOF	AICF	BITF	BICF	DFW
THEOR	AICR	BITR	BICR	LFFW
1.386491D+01	-2.078616D+00	8.000000D-01	8.000000D-01	1.358762D+03
1.490430D+01	6.021768D-01	8.000000D-01	8.000000D-01	-1.839830D+01
THEIAC	DELIAB	DELIAS	DELIAR	DELTAC
1.438461D+01	-3.035518D+00	-9.039361D-01	-2.506791D-01	5.724502D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
7.605362D+03	3.586753D+02	-1.625731D+02	1.291296D+03	-4.674516D+02
9.870171D+03	5.776107D+02	4.069984D+01	1.955371D+03	6.573981D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.158660D+04	-3.079921D+01	2.112463D+03	2.496946D+03	5.824278D+02
1.418255D+04	1.358537D+03	-5.020168D+03	5.403390D+03	7.129194D+02
XR	L/DE	SHPTOT	WFF	NMLB
1.690055D+03	5.657901D+00	1.395347D+03	1.396347D+03	6.803465D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	5.384214D-02	3.221362D-03	7.719846D-01	-4.689713D-02
5.841923D-02	6.995601D-02	3.943101D-03	7.749210D-01	-5.105131D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF	DFR	AOR
2.242198D-01	5.438065D+00	1.531606D+00	8.899751D-01	2.763672D+00
2.256880D-01	6.974682D+00	1.778118D-02		3.714829D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
1.930484D+00	-1.116731D+00	5.795151D-01	4.479841D+00	5.514023D+00
2.940485D+00	1.607167D+00	4.791806D-01	6.383369D+00	7.310138D+00
CAPVF	ALPHAF	BETAFF	ATIPF	BPTPF
CAPVR	ALPHAR	BETAR	ATIPR	BPTPR
1.604705D+02	-9.912624D+00	3.498486D+02	3.519075D+02	2.230214D+00
1.617342D+02	-1.033529D+01	3.499154D+02	3.554175D+02	3.351035D+00

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMIF	CTFP	A90F	
RMTR	CTRP	A90RA	
4.889826D-01	5.355205D-02	5.540600D-01	
4.853568D-01	6.957522D-02	8.852701D-01	

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
2.016788D+01	6.025957D+02	1.441717D+03	6.584796D-02
2.620226D+01	7.391217D+02	1.442717D+03	1.152339D+03

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

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V	RC	GM	RHO	XF	LW
FE	ALPHA	ALFF	THETA	LF	LW
9.50000D+01	0.0	1.75000D+04	2.37800D-03	8.387498D+02	
4.40000D+01	6.275181D-01	-1.41525D+00	7.215231D-01	7.560987D+03	
VTF	CGF	BETAF	PSI	XR	LW
VTR	CGL	PHI	GAMMA	LR	LW
7.05000D+02	-2.190042D+01	0.0	-3.666461D-03	1.107626D+03	
7.05000D+02	0.0	-3.738592D-01	0.0	9.849952D+03	
THEOF	AICF	B1TF	BICF	DFW	
THEOR	AICR	B1TR	BICR	LFFW	
1.351494D+01	2.459160D-01	1.00000D+00	1.00000D+00	1.352242D+03	
1.467908D+01	-1.306320D-02	1.00000D+00	1.00000D+00	4.376642D+01	
THETAC	DELIAB	DELIAS	DELTAR	DELTAC	
1.409701D+01	-3.164436D+00	8.944550D-02	4.490118D-02	5.501558D+00	
TF	HF	YF	MHF	LHF	
TR	HR	YR	MHR	LHR	
7.599878D+03	3.374620D+02	6.631763D+01	1.267762D+03	6.764066D+02	
9.897802D+03	5.309386D+02	5.704896D+01	1.699861D+03	6.795665D+02	
QF	LFZ	YFY	LF	RHPF	
QR	DFX	MF	NF	RHPR	
1.076821D+04	5.857361D+01	1.168487D+02	3.601027D+02	5.412898D+02	
1.350560D+04	1.351682D+03	-3.668543D+03	6.941909D+02	6.788910D+02	
XR	L'DE	SHPTOT	WFF	NMLB	
1.409665D+03	5.616628D+00	1.320181D+03	1.321181D+03	7.190538D-02	
SIGOF	CTSF	CPSF	AMTF	LAMDAF	
SIGOR	CTSR	CPSR	AMTR	LAMDAR	
5.841923D-02	5.424020D-02	2.993831D-03	7.735651D-01	-4.281494D-02	
5.841923D-02	7.003608D-02	3.754892D-03	7.746765D-01	-4.773437D-02	
MUF	VF	DFFR	DF	AOF	
MUR	VR	DFRF		AOR	
2.248644D-01	5.437475D+00	1.625179D+00	9.195538D-01	2.761244D+00	
2.261815D-01	7.007273D+00	8.424715D-16		3.697075D+00	
AIF	BIF	BETAOF	B18OF	A27OF	
AIR	BIR	BETAOR	B18OR	A27OR	
2.026357D+00	1.098318D+00	5.085403D-01	4.577999D+00	5.459316D+00	
2.761055D+00	1.103450D+00	6.442305D-01	6.189371D+00	7.199776D+00	
CAPVF	ALPHAF	BETAFW	AT1PF	BPTPF	
CAPVR	ALPHAR	BETARW	AT1PR	BPTPR	
1.604493D+02	-8.872482D+00	3.60000D+02	-6.846125D+00	2.304870D+00	
1.616688D+02	-9.486471D+00	3.60000D+02	-3.611426D+00	2.973387D+00	

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTF	CTFP	A90F	
RMTR	CTRP	A90RA	
4.872868D-01	5.360464D-02	4.803326D-01	
4.855728D-01	6.983256D-02	8.535647D-01	

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NNLB
DELHPR	RHPR	NFF	RP
2.018768D+01	5.614775D+02	1.366668D+03	6.946132D-02
2.629917D+01	7.051901D+02	1.367668D+03	1.215573D+03

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

CASE 23

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V	RC	GW	RHO	XF LW
FE	ALPHA	1.75000D+04	THETA	LF LW
9.50000D+01	0.0	1.75000D+04	2.37800D-03	9.096908D+02
4.40000D+01	-3.777316D-01	-2.379267D+00	5.347378D-01	7.569820D+03
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.05000D+02	-2.190042D+01	1.00000D+01	-9.993886D+00	1.206069D+03
7.05000D+02	0.0	5.023063D+00	0.0	9.827782D+03
THEOF	AICF	B1TF	B1CF	DFW
THEOR	AICR	B1TR	B1CR	LFFW
1.38995D+01	2.779677D+00	8.00000D-01	8.00000D-01	1.357231D+03
1.488428D+01	-7.319594D-01	8.00000D-01	8.00000D-01	-1.342871D+01
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.439189D+01	-2.992786D+00	1.183653D+00	3.650228D-01	5.730146D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
7.614404D+03	3.880280D+02	3.310920D+02	1.553642D+03	1.959304D+03
9.885915D+03	5.555005D+02	5.617761D+01	1.704629D+03	6.310667D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	NF	NF	RHPR
1.161283D+04	-2.237611D+01	-1.801110D+03	-2.223887D+03	5.837465D+02
1.412918D+04	1.357113D+03	-5.031441D+03	-4.858148D+03	7.102368D+02
XR	L/DE	SHPTOT	WFF	NMLB
1.642497D+03	5.580530D+00	1.393983D+03	1.394983D+03	6.810117D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	5.437102D-02	3.228656D-03	7.735998D-01	-4.635112D-02
5.841923D-02	7.016267D-02	3.928264D-03	7.742912D-01	-5.058008D-02
MUF	VF	DFFR	DFF	A0F
MUR	VR	DFRF		A0R
2.243164D-01	5.447240D+00	1.538974D+00	8.885520D-01	2.816100D+00
2.257605D-01	6.985408D+00	1.778718D-02	3.724578D+00	
AIF	B1F	BETA0F	B180F	A270F
AIR	B1R	BETA0R	B180R	A270R
1.923176D+00	3.577648D+00	6.252766D-01	4.510557D+00	5.736099D+00
2.905427D+00	5.241884D-01	5.074138D-01	6.356041D+00	7.285348D+00
CAPVF	ALPHA F	BETA F W	AT1PF	BPTPF
CAPVR	ALPHA R	BETA R W	AT1PR	BPTPR
1.604703D+02	-9.769820D+00	1.014715D+01	3.520454D+02	4.061795D+00
1.617234D+02	-1.021251D+01	1.008156D+01	3.555277D+02	2.952334D+00

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMIF	CTFP	A90F	
RMTR	CTRP	A90RA	
4.851065D-01	5.366726D-02	5.075717D-01	
4.863332D-01	6.967539D-02	9.006487D-01	

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
2.021127D+01	6.039578D+02	1.440435D+03	6.590656D-02
2.623998D+01	7.364768D+02	1.441435D+03	1.153365D+03

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

V	RC	GM	RH0	XF LM
FE	ALPHA	ALFF	THETA	LF LM
9.500000D+01	0.0	1.750000D+04	2.378000D-03	1.204753D+03
4.600000D+01	-3.619701D+00	-5.704292D+00	5.638724D-01	7.720607D+03
VTF	CGF	BETAF	PSI	XR LM
VTR	CGL	PHI	GAMMA	LR LM
7.050000D+02	-2.190042D+01	2.000000D+01	-2.026786D+01	1.511944D+03
7.050000D+02	0.0	1.141547D+01	0.0	9.794585D+03
THEOF	AICF	BITF	BICF	DFW
THEOR	AICR	BITR	BICR	LFWM
1.490668D+01	4.067409D+00	3.000000D-01	3.000000D-01	1.236228D+03
1.558769D+01	-1.824804D+00	3.000000D-01	3.000000D-01	-4.361191D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.524718D+01	-2.676850D+00	1.949383D+00	3.388164D-01	6.393165D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
7.798497D+03	4.925805D+02	4.229592D+02	2.062994D+03	2.294968D+03
9.890215D+03	6.352419D+02	-1.610812D+00	1.904988D+03	3.365919D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.401878D+04	-5.132967D+02	-3.890518D+03	-3.792963D+03	7.046876D+02
1.632692D+04	1.206228D+03	-1.054174D+04	-6.145572D+03	8.207114D+02
XR	L/DE	SHPTOT	WFF	NMLB
2.488727D+03	5.676408D+00	1.625399D+03	1.626399D+03	5.841125D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	5.531976D-02	3.897571D-03	7.725290D-01	-5.709983D-02
5.841923D-02	7.048212D-02	4.539290D-03	7.729858D-01	-5.938010D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
2.223478D-01	5.551401D+00	1.278374D+00	8.802969D-01	2.957840D+00
2.241474D-01	6.973781D+00	6.772319D-02		3.808021D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
1.837087D+00	4.664989D+00	8.868767D-01	4.584565D+00	6.334800D+00
3.092114D+00	-5.601192D-01	4.263525D-01	6.656900D+00	7.664612D+00
CAPVF	ALPHA	BETAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
1.605508D+02	-1.248333D+01	2.045449D+01	3.487174D+02	5.013683D+00
1.618296D+02	-1.245024D+01	2.028301D+01	3.524724D+02	3.142435D+00

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTR	CTFP	A90F	
RMTR	CTRP	A90RA	
4.848512D-01	5.473628D-02	7.191624D-01	
4.881328D-01	6.944004D-02	1.084543D+00	

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
2.061387D+01	7.253014D+02	1.672164D+03	5.677865D-02
2.615135D+01	8.468628D+02	1.673164D+03	9.936263D+02

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
5.439174D+02	1.499900D+04	1.092210D+05	1.032000D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-4.936870D-02	2.420838D-01	1.135450D-01	5.290784D-01
1.261792D-03	6.591153D-01	-9.209094D-02	1.899791D-01
4.875044D-02	-8.051763D-02	-7.243223D-02	7.340007D+00
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
1.349487D-02	-8.300234D-02	6.193588D-01	-9.655055D+00
3.255282D-02	-2.854091D-01	1.166400D+00	4.901617D+00
-9.100902D-01	-3.629566D-01	-1.989514D-01	-1.370258D+02
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-3.737938D-03	1.432132D-01	4.903288D-01	2.289364D-01
-5.465778D-03	-1.293729D+00	-4.067656D-02	-8.199321D-01
2.040228D-02	-3.393853D-01	-1.958534D-01	3.071826D+00
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
-3.798170D-02	-8.629551D-01	1.908563D-01	1.045433D-01
-1.631877D-01	-1.748287D-01	8.509314D-01	-2.457001D+01
6.245190D-02	-2.517499D-01	-2.386678D-01	9.402938D+00
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
-3.202626D-03	-6.386897D-01	2.103349D-02	-2.756530D-02
-5.100436D-03	9.932509D-02	3.621827D-01	-7.679363D-01
9.347014D-03	-5.682626D-02	-1.842437D-01	1.407313D+00
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
-1.554420D-05	5.804925D-02	4.910696D-02	3.929539D-02
-4.031387D-03	-2.058005D-01	7.161097D-03	-6.069773D-01
-3.949852D-04	-6.000171D-02	1.163937D-01	-5.947011D-02

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	-0.386D-05	0.625D-02	0.105D-03	0.157D-01	0.162D-02	0.550D-01
CTR	0.287D-05	0.202D-02	0.861D-04	0.130D-01	0.170D-02	0.427D-01
CHF	0.725D-06	0.511D-03	0.747D-05	0.112D-02	0.191D-03	0.486D-02
CHR	0.216D-05	0.152D-02	0.677D-05	0.102D-02	0.194D-04	0.443D-02
AlF	0.426D-03	0.300D+00	0.788D-03	0.119D+00	0.661D-01	0.685D+00
AlR	0.482D-03	0.339D+00	0.639D-03	0.962D-01	0.720D-01	0.610D+00
VFR	-0.465D-01	0.328D+02	0.182D+00	0.273D+02	0.291D+01	0.937D+02
VRR	-0.340D-01	0.240D+02	0.149D+00	0.225D+02	0.302D+01	0.708D+02
LF			0.348D+02	0.524D+04		
DF			0.647D+01	0.975D+03		
MF			0.336D+03	0.505D+05		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.166D-05	0.249D-03	0.533D-04	0.693D-04	0.305D-02
CYR	0.201D-05	0.303D-03	0.141D-03	0.131D-04	0.431D-02
B1F	-0.161D-03	0.242D-01	0.499D-01	0.160D-01	0.952D+00
B1R	0.167D-03	0.252D-01	0.800D-01	0.774D-03	0.992D+00
YF	-0.799D+02	0.120D+05			
LF	0.212D+02	0.320D+04			
NF	-0.400D+03	0.602D+05			
CIF					-0.593D-02
CTR					0.694D-02

FORCE = 0.2414466D+07

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X	BICF	BICR	OMEGAF	OMEGAR
Z	0.845D+01	0.154D+02	0.0	0.0
M	0.554D+02	0.720D+02	0.0	0.0
Y	-0.857D+01	0.387D+01	0.0	0.0
L	-0.315D+01	0.724D+00	0.0	0.0
N	-0.563D+00	0.372D+00	0.0	0.0
	-0.506D+00	-0.329D-01	0.0	0.0
CTF	-0.157D-01	-0.108D-06	0.0	0.0
CTR	0.353D-02	-0.159D-01	0.0	0.0
CHF	-0.441D-02	0.116D-07	0.0	0.0
CHR	0.269D-03	-0.547D-02	0.0	0.0
AIF	-0.108D+01	0.678D-05	0.0	0.0
AIR	0.239D-01	-0.107D+01	0.0	0.0
VFR	-0.267D+02	-0.995D-03	0.0	0.0
VRR	0.631D+01	-0.267D+02	0.0	0.0
QF	-0.359D+01	-0.243D-04	0.0	0.0
QR	0.967D-01	-0.741D+00	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELR	QFALPHA
	-0.495D-02	0.132D+01	0.596D+00	0.121D+01
	-0.203D-02	0.170D+01	-0.418D-01	-0.308D+00
	0.231D-01	-0.208D+00	-0.623D-01	0.347D+01
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELR	QRALPHA
	-0.530D-02	-0.550D-01	-0.623D+00	0.124D+01
	-0.191D-02	0.265D+01	0.113D-01	-0.287D+00
	0.290D-02	0.523D+00	-0.156D-01	0.436D+00

V	RC	GM	RHO	XF	
FE	ALPHA	ALFF	THETA	LF	LW
9.500000D+01	0.0	1.750000D+04	2.378000D-03	1.841639D+03	
4.400000D+01	-9.824897D+00	-1.226533D+01	1.149092D+00	8.536456D+03	
VTF	CGF	BETAF	PSI	XR	LW
VTR	CGL	PHI	GAMMA	LR	LW
7.050000D+02	-2.190042D+01	3.000000D+01	-3.105970D+01	2.170227D+03	
7.050000D+02	0.0	1.865500D+01	0.0	1.012305D+04	
THEOF	AICF	BITF	BICF	DFW	
THEOR	AICR	BITR	BICR	LFFW	
1.683207D+01	5.290091D+00	-6.000000D-01	-6.000000D-01	1.223397D+03	
1.703935D+01	-2.875076D+00	-6.000000D-01	-6.000000D-01	-2.296454D+03	
THETAC	DELTAB	DELTAS	DELTAR	DELTAC	
1.693571D+01	-2.165318D+00	2.705123D+00	3.343152D-01	7.702099D+00	
TF	HF	YF	MHF	LHF	
TR	HR	YR	MHR	LHR	
8.701177D+03	7.431277D+02	5.337578D+02	2.972587D+03	2.537588D+03	
1.032106D+04	8.134584D+02	-2.853228D+01	2.382275D+03	1.883889D+02	
QF	LFZ	YFY	LF	RHPF	
QR	DFX	MF	NF	RHPR	
1.951614D+04	-2.471532D+03	-6.156421D+03	-4.693355D+03	9.810254D+02	
2.121910D+04	8.135931D+02	-2.559835D+04	-8.552998D+03	1.066629D+03	
XR	L/DE	SHPTOT	WFF	NMLB	
4.386946D+03	5.882470D+00	2.147654D+03	2.148654D+03	4.421373D-02	
SIGOF	CTSF	CPSF	AMTF	LAMDAF	
SIGOR	CTSR	CPSR	AMTR	LAMDAR	
5.841923D-02	6.186992D-02	5.425974D-03	7.705429D-01	-7.561623D-02	
5.841923D-02	7.349789D-02	5.899438D-03	7.704800D-01	-7.596110D-02	
MUF	VF	DFFR	DF	AOF	
MUR	VR	DFRF		AOR	
2.179696D-01	6.164373D+00	9.646119D-01	9.067776D-01	3.489036D+00	
2.202673D-01	7.239319D+00	1.374361D-01		4.100389D+00	
AIF	BIF	BETAOF	B180F	A270F	
AIR	BIR	BETAOR	B18OR	A27OR	
2.009318D+00	6.026420D+00	1.203518D+00	5.252107D+00	7.664325D+00	
3.483880D+00	-1.714728D+00	3.120798D-01	7.325755D+00	8.445581D+00	
CAPVF	ALPHA	BETAFW	ATIPF	BPTPF	
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR	
1.607379D+02	-1.705582D+01	3.108363D+01	3.426844D+02	6.352566D+00	
1.620475D+02	-1.660665D+01	3.072401D+01	3.466590D+02	3.883003D+00	

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTF	CTFP	A90F	
RMTR	CTRP	A90RA	
4.848019D-01	6.052036D-02	1.133186D+00	
4.911453D-01	7.176875D-02	1.405161D+00	

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
2.279217D+01	1.003818D+03	2.197474D+03	4.321178D-02
2.702835D+01	1.093657D+03	2.198474D+03	7.562062D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

CASE 17

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V	RC	GM	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
1.400000D+02	0.0	1.750000D+04	2.378000D-03	1.874076D+03
4.400000D+01	-7.338039D+00	-8.383189D+00	-4.792722D+00	8.474553D+03
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	-2.190042D+01	-1.000000D+01	1.137551D+01	2.087999D+03
7.050000D+02	0.0	-1.376268D+01	0.0	9.997142D+03
THEOF	AICF	BITF	BICF	DFW
THEOR	AICR	BITR	BICR	LFFW
1.885756D+01	-4.636868D+00	2.800000D+00	2.800000D+00	3.128496D+03
1.928340D+01	2.326511D+00	4.000000D+00	4.000000D+00	-1.507874D+03
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.907048D+01	-3.306606D+00	-2.296486D+00	-3.294604D-01	9.356962D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
8.656774D+03	6.248736D+02	-4.371922D+02	2.119437D+03	-1.217730D+03
1.019385D+04	6.229749D+02	3.183540D+02	2.198525D+03	1.866394D+03
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
2.424513D+04	-1.895106D+03	6.907681D+03	9.118106D+03	1.218739D+03
2.696013D+04	2.910283D+03	-2.312522D+04	7.432498D+03	1.355215D+03
XR	L/DE	SHPTOT	MFF	NMLB
3.830358D+03	7.323972D+00	2.673954D+03	2.674954D+03	5.233734D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LANDAR
5.841923D-02	6.103387D-02	6.740751D-03	8.343050D-01	-1.017593D-01
5.841923D-02	7.183957D-02	7.495587D-03	8.402141D-01	-9.591136D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
3.214492D-01	4.188234D+00	1.200347D+00	9.439826D-01	3.393448D+00
3.252602D-01	4.910135D+00	1.697884D-02		3.953380D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
3.031780D+00	-2.564261D+00	-1.816641D-01	5.945284D+00	9.983011D+00
2.976601D+00	3.618081D+00	3.786329D-01	6.364570D+00	1.156677D+01
CAPVF	ALPHAF	BETAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
2.364755D+02	-1.659842D+01	3.496453D+02	3.461937D+02	3.970784D+00
2.377280D+02	-1.529434D+01	3.497680D+02	3.486386D+02	4.685153D+00

CASE 17

PAGE 4

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTF	CTFP	A90F	
RMTR	CTRP	A90RA	
4.287735D-01	6.008149D-02	5.056267D-01	
4.201062D-01	7.087609D-02	4.561703D-01	

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
5.931366D+01	1.278053D+03	2.803238D+03	4.992443D-02
6.997031D+01	1.425185D+03	2.804238D+03	8.736775D+02

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
5.439174D+02	1.499900D+04	1.092210D+05	1.032000D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-6.930580D-02	3.799906D-01	9.479646D-02	5.870503D-01
8.731111D-03	-2.639116D-01	6.865663D-02	2.017168D+00
5.280118D-02	-4.036418D-02	6.173769D-03	1.219877D+01
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
5.198999D-02	-1.200791D+00	4.221020D-01	-1.131212D+01
-2.740828D-02	-9.110417D-01	-9.266754D-01	-6.332196D+00
-1.045109D+00	-9.023189D-01	2.640056D-01	-2.414537D+02
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-3.148577D-03	3.478079D-01	5.406342D-01	2.404085D-01
2.670074D-03	-1.472172D+00	1.759967D-02	6.168730D-01
2.254864D-02	-3.120871D-01	1.439751D-01	5.209461D+00
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
3.649059D-02	4.749988D-02	-4.968626D-02	-3.219722D-01
-2.304043D-01	1.233195D-01	9.182829D-01	-5.323081D+01
-6.186669D-02	-3.733391D-02	-1.227737D-01	-1.429320D+01
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
3.876412D-03	-2.858518D-01	-5.758779D-02	-8.077558D-02
-1.350615D-02	1.341788D-01	3.735514D-01	-3.120356D+00
-1.240667D-02	2.388796D-02	-1.623602D-01	-2.866340D+00
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
8.784080D-04	-6.262278D-03	6.993931D-02	-2.220837D-02
-8.667709D-05	-1.893052D-01	1.713449D-02	-2.002520D-02
7.177602D-05	-7.318520D-02	1.386930D-01	1.658257D-02

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	-0.910D-05	-0.642D-02	0.112D-03	0.258D-01	-0.186D-02	0.626D-01
CTR	-0.186D-05	-0.131D-02	0.948D-04	0.219D-01	0.207D-02	0.523D-01
CHF	0.118D-05	0.834D-03	0.891D-05	0.206D-02	-0.130D-03	0.601D-02
CHR	0.212D-05	0.150D-02	0.740D-05	0.171D-02	0.133D-03	0.508D-02
AIF	0.425D-03	0.300D+00	0.120D-02	0.277D+00	-0.100D+00	0.197D+01
AIR	0.502D-03	0.354D+00	0.104D-02	0.240D+00	-0.486D-01	0.976D+00
VFR	-0.276D-01	-0.194D+02	0.132D+00	0.306D+02	-0.226D+01	0.730D+02
VRR	-0.217D-01	-0.153D+02	0.112D+00	0.258D+02	0.245D+01	0.600D+02
LF			0.700D+02	0.162D+05		
DF			0.468D+01	0.108D+04		
MF			0.500D+03	0.115D+06		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.231D-05	-0.534D-03	0.185D-04	-0.877D-05	0.361D-02
CYR	0.250D-05	0.578D-03	0.888D-05	0.463D-06	0.425D-02
BIF	-0.264D-03	-0.609D-01	-0.684D-01	-0.170D-01	0.105D+01
BIR	0.318D-03	0.734D-01	0.614D-01	0.110D-02	0.100D+01
YF	-0.114D+03	-0.263D+05			
YR	-0.759D+02	-0.175D+05			
NF	0.346D+01	0.798D+03			
CTF					0.400D-02
CTR					-0.542D-02

FORCE = 0.241446D+07

X	BICF	BICR	OMEGAF	OMEGAR
Z	0.647D+01	0.134D+02	0.0	0.0
M	0.964D+02	0.113D+03	0.0	0.0
Y	-0.128D+02	0.675D+01	0.0	0.0
L	0.479D+01	0.219D+01	0.0	0.0
N	0.140D+01	0.461D+00	0.0	0.0
	-0.386D+00	0.631D+00	0.0	0.0
CTF	-0.254D-01	0.895D-06	0.0	0.0
CTR	0.387D-02	-0.252D-01	0.0	0.0
CHF	-0.558D-02	0.105D-06	0.0	0.0
CHR	0.297D-03	-0.616D-02	0.0	0.0
AIF	-0.128D+01	0.277D-04	0.0	0.0
AIR	0.399D-01	-0.129D+01	0.0	0.0
VFR	-0.296D+02	-0.118D-01	0.0	0.0
VRR	0.466D+01	-0.292D+02	0.0	0.0
QF	-0.276D+02	-0.365D-03	0.0	0.0
QR	0.334D+01	-0.248D+02	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELR	QFALPHA
	-0.136D-01	-0.111D+01	0.119D+01	0.256D+01
	0.736D-02	0.345D+00	0.892D-01	0.170D+01
	0.101D+00	-0.110D+01	0.130D+00	0.234D+02
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELR	QRALPHA
	-0.858D-02	-0.769D+00	-0.150D+01	0.261D+01
	0.163D-02	0.345D+01	0.782D-01	0.376D+00
	0.842D-01	0.102D+01	-0.194D+00	0.194D+02

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PAGE 3

V	RC	GM	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
1.400000D+02	0.0	1.750000D+04	2.378000D-03	1.672813D+03
4.400000D+01	-6.015657D+00	-7.040340D+00	-4.726253D+00	8.355122D+03
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	-2.190042D+01	-7.000000D+00	7.923307D+00	1.896344D+03
7.050000D+02	0.0	-1.031481D+01	0.0	9.948374D+03
THEOF	AICF	BITF	BICF	DFW
THEOR	AICR	BITR	BICR	FFW
1.821050D+01	-3.846315D+00	2.800000D+00	2.800000D+00	3.040294D+03
1.868625D+01	1.057593D+00	4.000000D+00	4.000000D+00	-1.116372D+03
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.844838D+01	-3.361301D+00	-1.628809D+00	-4.764326D-01	8.874710D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
8.499276D+03	6.071990D+02	-3.663945D+02	2.051822D+03	-1.032902D+03
1.011018D+04	5.919984D+02	1.559441D+02	2.017321D+03	1.302125D+03
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
2.241923D+04	-1.428848D+03	3.651497D+03	6.312276D+03	1.113326D+03
2.491453D+04	2.906556D+03	-2.083123D+04	8.201292D+03	1.252388D+03
XR	L/DE	SHPTOT	WFF	NMLB
3.388699D+03	7.457297D+00	2.465714D+03	2.466714D+03	5.675566D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	6.054602D-02	6.157719D-03	8.356849D-01	-9.495692D-02
5.841923D-02	7.162681D-02	6.926861D-03	8.405219D-01	-8.928799D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
3.233527D-01	4.118437D+00	1.266034D+00	9.406592D-01	3.367457D+00
3.269039D-01	4.873574D+00	8.453449D-03		3.896226D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
3.096008D+00	-2.083078D+00	-2.917388D-01	5.992957D+00	9.713381D+00
2.988809D+00	2.505807D+00	2.945668D-01	6.330017D+00	1.127372D+01
CAPVF	ALPHA F	BETAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
2.364626D+02	-1.540807D+01	3.527776D+02	3.475804D+02	3.731552D+00
2.376716D+02	-1.414327D+01	3.528565D+02	3.499732D+02	3.900263D+00

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMTF	CTFP	A90F
RMTB	CTRP	A90RA
4.271113D-01	5.923477D-02	4.685564D-01
4.205086D-01	7.053034D-02	3.947115D-01

3

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	NFF	RP
5.847776D+01	1.171804D+03	2.593821D+03	5.395362D-02
6.962898D+01	1.322017D+03	2.594821D+03	9.441884D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

V	RC	GW	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
1.400000D+02	0.0	1.750000D+04	2.378000D-03	1.575108D+03
4.400000D+01	-5.189007D+00	-6.210490D+00	-4.677193D+00	8.256075D+03
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	-2.190042D+01	-4.000000D+00	4.518044D+00	1.795446D+03
7.050000D+02	0.0	-6.208454D+00	0.0	9.932745D+03
THEOF	AICF	B1TF	B1CF	DFW
THEOR	AICR	B1TR	B1CR	LFFW
1.772197D+01	-2.491172D+00	2.800000D+00	2.800000D+00	3.000347D+03
1.830740D+01	-1.084097D-01	4.000000D+00	4.000000D+00	-8.281219D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.801469D+01	-3.462776D+00	-8.029394D-01	-4.870066D-01	8.538518D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
8.385969D+03	5.650385D+02	-2.158295D+02	1.984786D+03	-3.928552D+02
1.007836D+04	5.565270D+02	1.618037D+01	1.838115D+03	7.818346D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
2.062663D+04	-1.096084D+03	2.128397D+03	2.910193D+03	1.036847D+03
2.375130D+04	2.913154D+03	-1.834978D+04	7.354735D+03	1.193915D+03
XR	L/DE	SHPTOT	WFF	NMLB
3.163815D+03	7.751348D+00	2.330762D+03	2.331762D+03	6.004043D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	5.931551D-02	5.734718D-03	8.375636D-01	-9.066276D-02
5.841923D-02	7.141524D-02	6.603452D-03	8.401509D-01	-8.507290D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF	DFR	AOR
3.244843D-01	4.090977D+00	1.293822D+00	9.429986D-01	3.242234D+00
3.278683D-01	4.880262D+00	2.780542D-03		3.922434D+00
A1F	B1F	BETAOF	B180F	A270F
A1R	B1R	BETAOR	B180R	A270R
3.170181D+00	-8.677569D-01	-5.437945D-01	5.882509D+00	9.199528D+00
2.888046D+00	1.478514D+00	3.038119D-01	6.184181D+00	1.082540D+01
CAPVF	ALPHAF	BETAFW	AT1PF	BPTPF
CAPVR	ALPHAR	BETARW	AT1PR	BPTPR
2.364550D+02	-1.465589D+01	3.558822D+02	3.484812D+02	3.286800D+00
2.376228D+02	-1.340682D+01	3.559248D+02	3.506990D+02	3.244505D+00

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMTF	CTFP	A90F
RMIR	CIRP	A90RA
4.257954D-01	5.853256D-02	3.377872D-01
4.210248D-01	7.041954D-02	4.157966D-01

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	MFF	RP
5.778453D+01	1.094631D+03	2.458066D+03	5.693218D-02
6.951960D+01	1.263435D+03	2.459066D+03	9.963131D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

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V	RC	GM	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
1.400000D+02	0.0	1.750000D+04	2.378000D-03	1.510007D+03
4.400000D+01	-4.771221D+00	-5.806163D+00	-4.719358D+00	8.242134D+03
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	-2.190042D+01	0.0	8.682697D-02	1.750724D+03
7.050000D+02	0.0	-1.078736D+00	0.0	1.004020D+04
THEOF	AICF	BITF	BICF	DFW
THEOR	AICR	BITR	BICR	LFFW
1.750838D+01	-2.156472D-01	2.800000D+00	2.800000D+00	3.007278D+03
1.821566D+01	-2.888377D-01	4.000000D+00	4.000000D+00	-8.240659D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.786202D+01	-3.558120D+00	4.083777D-02	-8.873988D-02	8.420173D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
8.360014D+03	5.683794D+02	6.366139D+01	2.047580D+03	8.391776D+02
1.017632D+04	5.595238D+02	7.331848D+01	1.768572D+03	9.809335D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.997480D+04	-1.071348D+03	3.485681D+02	9.852589D+02	1.004081D+03
2.358386D+04	2.928314D+03	-1.648144D+04	1.461579D+03	1.185499D+03
XR	L/DE	SHPTOT	WFF	NMLB
3.038264D+03	7.650511D+00	2.289579D+03	2.290579D+03	6.111991D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	5.945271D-02	5.553491D-03	8.394945D-01	-8.846342D-02
5.841923D-02	7.250157D-02	6.556899D-03	8.403180D-01	-8.302350D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
3.250420D-01	4.078487D+00	1.316047D+00	9.533944D-01	3.233767D+00
3.283390D-01	4.926921D+00	6.435362D-11		3.986693D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
3.326431D+00	1.362663D+00	-7.199627D-01	6.025061D+00	9.219130D+00
2.872755D+00	1.592903D+00	3.744364D-01	6.229572D+00	1.091623D+01
CAPVF	ALPHAF	BETAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
2.364516D+02	-1.427122D+01	3.204915D-18	3.490552D+02	3.594718D+00
2.376047D+02	-1.303841D+01	3.172733D-18	3.511015D+02	3.284822D+00

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CASE 27

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMIF	CTFP	A90F	
RMTR	CTRP	A90RA	
4.236124D-01	5.843372D-02	2.786455D-01	
4.204513D-01	7.118135D-02	4.251742D-01	

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	, RHPR	WFF	RP
5.768695D+01	1.061768D+03	2.417538D+03	5.788621D-02
7.027167D+01	1.255770D+03	2.418538D+03	1.013009D+03

STABILITY NOT CALCULATED FOR THIS CASE. SKIPPING TO NEXT CASE

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V	RC	GN	RHO	XF LM
FE	ALPHA	ALFF	THETA	LF LM
1.400000D+02	0.0	1.750000D+04	2.378000D-03	1.496033D+03
4.400000D+01	-4.882975D+00	-5.905469D+00	-4.631058D+00	8.262278D+03
VTF	CGF	BETAF	PSI	XR LM
VTR	CGL	PHI	GAMMA	LR LM
7.050000D+02	-2.190042D+01	4.000000D+00	-4.300793D+00	1.770321D+03
7.050000D+02	0.0	3.786951D+00	0.0	1.007511D+04
THEOF	AICF	BITF	BICF	DFW
THEOR	AICR	BITR	BICR	FFW
1.761293D+01	2.091497D+00	2.800000D+00	2.800000D+00	2.986500D+03
1.827148D+01	-5.296864D-01	4.000000D+00	4.000000D+00	-9.098053D+02
THEIAC	DELIAB	DELIAS	DELTAR	DELTAC
1.794220D+01	-3.519994D+00	8.516214D-01	2.491217D-01	8.482328D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
8.375270D+03	5.985045D+02	3.423837D+02	2.171568D+03	1.912780D+03
1.021397D+04	5.627647D+02	1.214281D+02	1.721897D+03	1.114481D+03
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
2.020001D+04	-1.160717D+03	-1.366214D+03	-9.321865D+02	1.015402D+03
2.365216D+04	2.898217D+03	-1.655891D+04	-4.927316D+03	1.188932D+03
XR	L/DE	SHPTOT	WFF	NMLB
3.053178D+03	7.586155D+00	2.304333D+03	2.305333D+03	6.072874D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	5.944409D-02	5.616105D-03	8.399378D-01	-8.890953D-02
5.841923D-02	7.247485D-02	6.575889D-03	8.404386D-01	-8.349552D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
3.249317D-01	4.074372D+00	1.316238D+00	9.398561D-01	3.260948D+00
3.282401D-01	4.930670D+00	2.792273D-03		3.938815D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
3.296097D+00	3.352324D+00	-6.066975D-01	6.081290D+00	9.578855D+00
2.918348D+00	1.606632D+00	3.733529D-01	6.303690D+00	1.118707D+01
CAPVF	ALPHA F	BETAFW	ATIPF	BPTPF
CAPV	ALPHAR	BETARW	ATIPR	BPTPR
2.36450D+02	-1.435069D+01	4.114054D+00	3.489131D+02	4.701311D+00
2.376112D+02	-1.311950D+01	4.072518D+00	3.510354D+02	3.331369D+00

PAGE 4

CASE 28

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMIF	CTFP	A90F	
RMTR	CTRP	A90RA	
4.213617D-01	5.857653D-02	2.979837D-01	
4.205667D-01	7.142889D-02	3.908781D-01	

3

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
5.782794D+01	1.073229D+03	2.432677D+03	5.752611D-02
7.051604D+01	1.259448D+03	2.433677D+03	1.006707D+03

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

CASE 29

PAGE 3

V	RC	GM	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
1.400000D+02	0.0	1.750000D+04	2.378000D-03	1.570683D+03
4.400000D+01	-5.544026D+00	-6.568708D+00	-4.628972D+00	8.350641D+03
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	-2.190042D+01	7.000000D+00	-7.624096D+00	1.852537D+03
7.050000D+02	0.0	7.417358D+00	0.0	1.004547D+04
THEOF	AICF	BITF	BICF	DEFW
THEOR	AICR	BITR	BICR	LFWF
1.803004D+01	3.417873D+00	2.800000D+00	2.800000D+00	2.980948D+03
1.856528D+01	-1.648976D+00	4.000000D+00	4.000000D+00	-1.074161D+03
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.829766D+01	-3.407859D+00	1.689601D+00	2.908540D-01	8.757875D+00
YF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
8.473292D+03	6.352825D+02	5.004417D+02	2.347356D+03	2.655106D+03
1.019849D+04	5.780144D+02	-1.309476D+01	1.684467D+03	6.147493D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
2.150049D+04	-1.357128D+03	-2.765295D+03	-4.145607D+03	1.080774D+03
2.476174D+04	2.863228D+03	-1.914194D+04	-6.519158D+03	1.244708D+03
XR	L/DE	SHPTOT	WFF	NNLB
3.236619D+03	7.275933D+00	2.425481D+03	2.426481D+03	5.769672D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	6.046316D-02	5.977673D-03	8.394934D-01	-9.230455D-02
5.841923D-02	7.260496D-02	6.884379D-03	8.392499D-01	-8.677058D-02
MUF	VF	DFFR	DFF	AOF
MUR	VR	DFRF		AOR
3.240694D-01	4.112582D+00	1.283471D+00	9.355788D-01	3.368298D+00
3.275056D-01	4.919261D+00	8.481659D-03		4.060791D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
3.242196D+00	4.759759D+00	-4.825709D-01	6.114264D+00	9.926115D+00
2.838843D+00	6.505643D-01	5.390989D-01	6.345586D+00	1.132914D+01
CAPVF	ALPHA F	BETAFW	ATIPF	BPTPF
CAPVR	ALPHA R	BETARW	ATIPR	BPTPR
2.364623D+02	-1.494009D+01	7.212296D+00	3.481982D+02	5.759092D+00
2.376454D+02	-1.369267D+01	7.136230D+00	3.502948D+02	2.912432D+00

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CASE 29

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTR	CTFP	A90F	
4.197505D-01	CTR	A90RA	
4.220013D-01	5.920300D-02	3.443006D-01	
	7.121869D-02	5.576267D-01	

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
5.844640D+01	1.139220D+03	2.554236D+03	5.478946D-02
7.030853D+01	1.315016D+03	2.555236D+03	9.588155D+02

STABILITY NOT CALCULATED FOR THIS CASE. SKIPPING TO NEXT CASE

V	RC	GW	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
1.400000D+02	0.0	1.750000D+04	2.37800D-03	1.696801D+03
4.400000D+01	-6.585252D+00	-7.617835D+00	-4.496703D+00	8.420747D+03
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	-2.190042D+01	1.000000D+01	-1.104222D+01	2.005317D+03
7.050000D+02	0.0	1.144538D+01	0.0	9.978811D+03
THEOF	AICF	B1TF	BICF	DFW
THEOR	AICR	B1TR	BICR	LFFW
1.857221D+01	4.307969D+00	2.800000D+00	2.800000D+00	2.973881D+03
1.903438D+01	-3.008251D+00	4.000000D+00	4.000000D+00	-1.280940D+03
THEIAC	DELIAB	DELTAS	DELTAR	DELTAC
1.880329D+01	-3.335032D+00	2.434958D+00	1.559193D-01	9.149840D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
8.563938D+03	6.686501D+02	5.870566D+02	2.514474D+03	3.002023D+03
1.016232D+04	5.702912D+02	-1.909014D+02	1.680707D+03	5.172743D+01
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
2.314465D+04	-1.613538D+03	-4.237487D+03	-7.153236D+03	1.163421D+03
2.646816D+04	2.807360D+03	-2.170754D+04	-5.835448D+03	1.330485D+03
XR	L/DE	SHPTOT	WFF	NMLB
3.563026D+03	7.083449D+00	2.593906D+03	2.594906D+03	5.395186D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	6.097615D-02	6.434788D-03	8.386868D-01	-9.754397D-02
5.841923D-02	7.232096D-02	7.358808D-03	8.378661D-01	-9.178807D-02
MUF	VF	DFFR	DF	A0F
MUR	VR	DFRF	DFR	A0R
3.226605D-01	4.154330D+00	1.228470D+00	9.354236D-01	3.450319D+00
3.262918D-01	4.899465D+00	1.707290D-02	6.149414D+00	4.003586D+00
A1F	B1F	BETA0F	B180F	A270F
A1R	B1R	BETA0R	B180R	A270R
3.144620D+00	5.533844D+00	-3.197733D-01	6.083115D+00	1.022519D+01
2.701541D+00	-4.014923D-01	6.558545D-01	6.149414D+00	1.139652D+01
CAPVF	ALPHAF	BETA0F	AT1PF	BPTPF
CAPVR	ALPHAR	BETA0R	AT1PR	BPTPR
2.364744D+02	-1.585713D+01	1.033160D+01	3.470594D+02	6.364909D+00
2.376842D+02	-1.457464D+01	1.021538D+01	3.491163D+02	2.731212D+00

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CASE 18

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMIF	CIFP	A90F
RMTR	CTRP	A90RA
4.193781D-01	5.970003D-02	4.129364D-01
4.240660D-01	7.074613D-02	5.440048D-01

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
5.893707D+01	1.222358D+03	2.722685D+03	5.140095D-02
6.984201D+01	1.400327D+03	2.723685D+03	8.995167D+02

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
5.439174D+02	1.499900D+04	1.092210D+05	1.032000D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-6.781306D-02	1.217102D-01	4.223720D-02	5.657267D-01
-1.914946D-03	1.074900D-01	-6.367172D-02	-4.431103D-01
4.980221D-02	-9.173188D-02	-4.521994D-02	1.152402D+01
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
5.262141D-02	5.661828D-01	4.905123D-01	-1.127441D+01
1.675975D-02	-1.043899D+00	9.059506D-01	3.878134D+00
-1.037422D+00	-3.480721D-01	-5.309771D-02	-2.400549D+02
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-3.075630D-03	3.249463D-01	5.419713D-01	2.331922D-01
-2.492205D-03	-1.308206D+00	-3.037999D-02	-5.766854D-01
2.181739D-02	-4.378696D-01	-1.433194D-01	5.048450D+00
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
-2.486259D-02	1.721857D-01	1.539427D-01	4.177612D-01
-2.445121D-01	-1.545913D-01	9.066311D-01	-5.657904D+01
7.370288D-02	-2.235239D-01	-1.734001D-01	1.705453D+01
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
-2.894684D-03	-3.509649D-01	-3.421559D-02	5.576207D-02
-1.408315D-02	1.524978D-01	3.760463D-01	-3.258779D+00
1.160313D-02	-1.030585D-03	-1.665919D-01	2.684914D+00
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
-1.356180D-03	7.406871D-02	1.066861D-01	3.350205D-02
8.343880D-04	-2.727300D-01	1.183325D-02	1.930738D-01
1.725046D-03	-1.176106D-01	1.172662D-01	3.991681D-01

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	-0.909D-05	-0.641D-02	0.110D-03	0.254D-01	-0.160D-02	0.619D-01
CTR	-0.196D-05	-0.138D-02	0.953D-04	0.220D-01	0.184D-02	0.525D-01
CHF	0.101D-05	0.709D-03	0.101D-04	0.235D-02	-0.141D-03	0.643D-02
CHR	0.219D-05	0.154D-02	0.688D-05	0.159D-02	0.768D-04	0.477D-02
AlF	0.408D-03	0.288D+00	0.120D-02	0.278D+00	-0.831D-01	0.106D+01
AlR	0.504D-03	0.355D+00	0.104D-02	0.241D+00	-0.650D-01	0.981D+00
VFR	-0.277D-01	-0.195D+02	0.131D+00	0.302D+02	-0.195D+01	0.722D+02
VRR	-0.224D-01	-0.158D+02	0.113D+00	0.261D+02	0.222D+01	0.603D+02
LF			0.682D+02	0.158D+05		
DF			0.409D+01	0.946D+03		
MF			0.495D+03	0.115D+06		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.242D-05	-0.561D-03	0.622D-04	-0.904D-04	0.345D-02
CYR	0.247D-05	0.571D-03	0.240D-04	-0.404D-04	0.436D-02
B1F	-0.297D-03	-0.686D-01	-0.564D-01	-0.205D-01	0.101D+01
B1R	0.368D-03	0.851D-01	0.737D-01	0.781D-03	0.106D+01
YF	-0.121D+03	-0.280D+05			
LF	-0.876D+02	-0.203D+05			
NF	0.136D+03	0.315D+05			
CTF					-0.453D-02
CTR					0.479D-02

FORCE = 0.241446D+07

X	BICF	BICR	OMEGAF	OMEGAR
Z	0.746D+01	0.127D+02	0.0	0.0
M	0.954D+02	0.114D+03	0.0	0.0
Y	-0.129D+02	0.689D+01	0.0	0.0
L	-0.621D+01	-0.157D+01	0.0	0.0
N	-0.473D+00	-0.801D+00	0.0	0.0
	-0.166D+01	0.890D+00	0.0	0.0
CTF	-0.253D-01	0.137D-05	0.0	0.0
CTR	0.398D-02	-0.256D-01	0.0	0.0
CHF	-0.574D-02	0.161D-06	0.0	0.0
CHR	0.280D-03	-0.605D-02	0.0	0.0
AIF	0.128D+01	0.290D-04	0.0	0.0
AIR	0.410D-01	-0.129D+01	0.0	0.0
VFR	-0.294D+02	-0.146D-01	0.0	0.0
VRR	0.479D+01	-0.296D+02	0.0	0.0
QF	-0.249D+02	0.124D-02	0.0	0.0
QR	0.311D+01	-0.233D+02	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELR	QFALPHA
	-0.122D-01	0.193D+01	0.113D+01	0.246D+01
	-0.599D-02	0.808D+00	-0.162D+00	-0.139D+01
	0.879D-01	-0.711D+00	-0.154D+00	0.203D+02
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELR	QRALPHA
	-0.863D-02	0.534D+00	-0.141D+01	0.254D+01
	-0.239D-02	0.327D+01	-0.408D-01	-0.554D+00
	0.758D-01	0.123D+01	0.126D+00	0.175D+02

CATALOG OF TRIM & STABILITY DERIVATIVE DATA

A-97 TRIM ANALYSIS (CH-46E)

GW = 17,500 lb CG = 20 in. aft

<u>ALTITUDE</u>	<u>AIRSPEED</u>	<u>CLIMB RATE</u>	<u>SIDESLIP</u>	<u>DERIVATIVES</u>
0 ft	-45 kt swd	0 ft/min	-90 deg	
	-30			X
	-15			
	15		90	
	30			X
	45			

CASE 30

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V	RC	GM	RHO	XF
FE	ALPHA	ALFF	THETA	LW
4.500000D+01	0.0	1.750000D+04	2.378000D-03	1.1873356D+03
4.400000D+01	-9.000000D+01	-9.000000D+01	6.136366D+00	8.432267D+03
VTF	CGF	BETAF	PSI	XR
VTR	CGL	PHI	GAMMA	LW
7.050000D+02	-2.190042D+01	-9.000000D+01	9.000000D+01	1.709594D+03
7.050000D+02	0.0	-9.536476D+00	0.0	1.102707D+04
THEOF	AICF	BLTF	BICF	DFW
THEOR	AICR	BLTR	BICR	LFFW
1.347800D+01	-5.046543D-01	-2.500000D+00	-2.500000D+00	2.416993D+03
1.525259D+01	1.786010D+00	-2.500000D+00	-2.500000D+00	-2.950554D-12
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.436530D+01	-1.388563D+00	-7.599984D-01	2.988161D-01	5.709532D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
8.508052D+03	3.549626D+02	1.711662D+02	1.285789D+03	5.726571D+02
1.114594D+04	5.356631D+02	-6.625642D+01	1.939743D+03	-1.699785D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.135111D+04	-2.416993D+03	2.650000D+03	-2.385000D+03	5.705907D+02
1.650333D+04	1.761218D-29	-2.416993D+03	2.650000D+03	8.295789D+02
XR	L/DE	SHPTOT	WFF	NMLB
1.957810D+04	-2.006435D+00	1.500170D+03	1.501170D+03	2.997663D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	6.012154D-02	3.155892D-03	6.957951D-01	-3.705300D-02
5.841923D-02	7.895484D-02	4.588335D-03	6.981866D-01	-4.420727D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
1.063603D-01	1.235265D+01	2.317180D-01	7.597311D-01	3.155499D+00
1.063418D-01	1.582119D+01	8.643176D-02		4.318408D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
8.716990D-01	-2.113071D+00	2.238275D+00	3.985056D+00	4.168707D+00
2.115333D-01	3.156043D+00	4.039947D+00	4.466319D+00	5.999342D+00
CAPVF	ALPHAF	BETAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
7.623750D+01	-1.040422D+01	2.684143D+02	2.613717D+02	2.285810D+00
7.652435D+01	-1.156421D+01	2.688290D+02	2.632115D+02	3.163124D+00

PAGE 4

CASE 30

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMIF	CTFP	A90F	
RMIR	CTRP	A90RA	
5.636127D-01	5.978170D-02	1.722731D+00	
5.58724D-01	7.817791D-02	2.485533D+00	

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHTOT	NMLB
DELHPR	RHPR	WFF	RP
2.706654D+00	5.732973D+02	1.506416D+03	2.985241D-02
3.539554D+00	8.331185D+02	1.507416D+03	5.224172D+02

STABILITY NOT CALCULATED FOR THIS CASE; SKIPPING TO NEXT CASE

PAGE 3

V	RC	GW	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
3.000000D+01	0.0	1.750000D+04	2.378000D-03	6.584239D+02
4.400000D+01	-9.000000D+01	-9.000000D+01	5.772864D+00	7.990518D+03
VTF	CGF	DEAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	-2.190042D+01	-9.000000D+01	9.000000D+01	1.189113D+03
7.050000D+02	0.0	-4.649652D+00	0.0	1.053272D+04
THEOF	AICF	BITF	BICF	DFW
THEOR	AICR	BITR	BICR	LEFW
1.290501D+01	1.461873D-01	-2.500000D+00	-2.500000D+00	1.172108D+03
1.475633D+01	1.555809D+00	-2.500000D+00	-2.500000D+00	-2.861711D-12
THEIAC	DELTAB	DELTAS	DELTAR	DELTAC
1.383067D+01	-1.448606D+00	-4.694178D-01	3.689712D-01	5.295096D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
8.010019D+03	3.485610D+02	1.659999D+02	1.408899D+03	6.274982D+02
1.058782D+04	5.002495D+02	3.571616D+01	1.823114D+03	1.468460D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.006035D+04	-1.172108D+03	1.285104D+03	-1.156594D+03	5.057073D+02
1.511260D+04	6.832746D-30	-1.172108D+03	1.285104D+03	7.596710D+02
XR	L/DE	SHPIOT	WFF	NMLB
1.852756D+04	-4.721477D+00	1.365378D+03	1.366378D+03	2.195585D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	5.682638D-02	2.797027D-03	6.739119D-01	-3.265589D-02
5.841923D-02	7.502127D-02	4.201680D-03	6.760736D-01	-4.124125D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
7.164099D-02	1.663412D+01	2.444375D-01	8.945913D-01	2.942495D+00
7.163807D-02	2.093139D+01	1.118500D-01		4.074129D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
9.881758D-01	-2.301606D+00	1.934674D+00	3.912532D+00	3.349814D+00
-2.676862D-01	2.958925D+00	4.311177D+00	3.776250D+00	5.007584D+00
CAPVF	ALPHA	BETAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
5.090858D+01	-7.202257D+00	2.692331D+02	2.614882D+02	2.504772D+00
5.115525D+01	-9.146332D+00	2.694337D+02	2.627323D+02	2.971008D+00

CASE 19

PAGE 4

CASE 19

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMTR	CTFP	A90F
RMTR	CTRP	A90RA
5.854926D-01	5.664986D-02	1.860285D+00
5.814501D-01	7.467313D-02	2.743317D+00

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
9.712512D-01	5.066785D+02	1.367630D+03	2.191973D-02
1.280257D+00	7.609513D+02	1.368630D+03	3.835953D+02

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
5.639174D+02	1.499900D+04	1.092210D+05	1.032000D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
7.332448D-03	3.130899D-01	9.956776D-02	7.520299D-01
-5.783407D-02	1.020502D+00	9.834816D-02	-1.840916D-01
5.646495D-02	-4.898027D-02	-4.763326D-03	1.797335D-01
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
-6.927271D-02	-4.224570D-01	1.462523D-01	-7.482519D+00
4.804065D-01	1.698049D+00	-9.273331D-01	1.529181D+00
-6.048690D-01	-4.463460D-01	8.560348D-02	-1.925358D+00
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MA	MR	MDELR	MALPHA
8.673495D-04	2.743476D-03	3.522793D-01	8.703893D-02
-1.820822D-02	-1.036350D+00	2.044493D-02	-5.795856D-02
8.243008D-03	-2.222365D-01	1.395298D-01	2.623831D-02
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
4.684635D-01	-1.466550D+00	3.978791D-02	3.387275D-01
-9.445920D-02	8.861910D-02	9.460357D-01	-3.006730D-01
-1.921500D-02	-1.875095D-01	-1.936768D-01	-6.116325D-02
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
-1.715030D-02	-7.820691D-01	-3.090302D-02	5.904947D-02
-5.580920D-03	1.779123D-01	3.777240D-01	-1.776462D-02
3.279661D-03	-5.229490D-02	-1.787178D-01	1.043949D-02
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
2.104444D-03	1.350051D-02	4.215039D-02	-2.236639D-03
-1.138686D-03	-1.568392D-01	1.362406D-02	-3.624551D-03
4.349850D-04	-4.185403D-02	1.286801D-01	1.384600D-03

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	0.870D-05	0.613D-02	0.680D-04	0.216D-03	0.143D-02	0.386D-01
CTR	0.580D-05	0.409D-02	0.632D-04	0.201D-03	0.108D-02	0.380D-01
CHF	0.156D-05	0.110D-02	0.308D-05	0.980D-05	0.203D-03	0.160D-02
CHR	0.226D-05	0.160D-02	0.319D-05	0.102D-04	0.136D-03	0.192D-02
AlF	0.886D-03	0.624D+00	0.283D-03	0.900D-03	0.384D-01	0.183D+00
AlR	0.889D-03	0.627D+00	0.248D-03	0.791D-03	0.399D-01	0.185D+00
VFR	0.491D-01	0.346D+02	0.407D+00	0.130D+01	0.834D+01	0.170D+03
VRR	0.331D-01	0.234D+02	0.391D+00	0.124D+01	0.664D+01	0.147D+03
LF			0.134D+02	0.428D+02		
DF			0.167D-30	0.531D-30		
MF			0.134D+02	0.428D+02		

LATERAL-DIRECTIONAL

	V	BETA	P	R	ALC
CYF	-0.278D-05	0.885D-05	0.137D-03	0.485D-04	0.351D-02
CYR	0.219D-05	0.697D-05	0.195D-03	0.600D-05	0.454D-02
B1F	-0.206D-03	0.654D-03	0.347D-01	0.463D-02	0.363D-01
B1R	-0.188D-03	0.598D-03	0.372D-01	0.101D-02	0.143D-01
YF	-0.394D+02	0.125D+03			
LF	0.354D+02	0.113D+03			
NF	-0.394D+02	0.125D+03			
CTF					0.423D-02
CTR					-0.469D-02

FORCE = 0.241446D+07

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X	BICF	BICR	OMEGAF	OMEGAR
Z	0.150D+02	0.200D+02	0.0	0.0
M	0.236D+01	0.183D+01	0.0	0.0
Y	-0.933D+00	-0.117D+01	0.0	0.0
L	0.246D+00	-0.388D+00	0.0	0.0
N	0.910D-01	-0.182D+00	0.0	0.0
	0.239D-01	0.213D-01	0.0	0.0
CTF	0.405D-04	0.429D-05	0.0	0.0
CTR	-0.804D-05	0.136D-03	0.0	0.0
CHF	-0.341D-02	-0.187D-06	0.0	0.0
CHR	-0.845D-06	-0.451D-02	0.0	0.0
AIF	0.330D-01	0.167D-03	0.0	0.0
AIR	-0.169D-03	-0.101D-01	0.0	0.0
VFR	0.162D+00	-0.682D-01	0.0	0.0
VRR	0.544D-01	0.549D+00	0.0	0.0
QF	-0.735D-01	-0.253D-02	0.0	0.0
QR	0.556D-04	0.195D+00	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QW	QFR	QFDELR	QFALPHA
	-0.671D-03	0.770D+00	0.427D+00	0.875D+00
	-0.292D-03	0.144D+01	-0.157D-01	-0.930D-03
	-0.681D-02	-0.117D+00	-0.233D-01	-0.217D-01
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELR	QRALPHA
	-0.533D-03	0.132D+00	-0.604D+00	0.124D+01
	0.410D-02	0.119D+01	-0.854D-02	0.131D-01
	-0.508D-02	0.411D+00	0.148D-01	-0.162D-01

V	RC	GW	RHO	XF LW
FE	ALPHA	ALFF	THEIA	LF LW
1.500000D+01	0.0	1.750000D+04	2.378000D-03	2.226931D+03
4.400000D+01	-9.000000D+01	-9.000000D+01	5.665137D+00	7.503416D+03
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	-2.190042D+01	-9.000000D+01	9.000000D+01	2.971584D+03
7.050000D+02	0.0	-2.916722D+00	0.0	9.947140D+03
THEOF	AICF	B1TF	BICF	DFW
THEOR	AICR	B1TR	BICR	LFFW
1.381416D+01	6.905805D-01	-2.500000D+00	-2.500000D+00	7.284667D+02
1.546058D+01	1.137210D+00	-2.500000D+00	-2.500000D+00	-2.667836D-12
THEIAC	DELTAB	DELTAS	DELTAR	DELTAC
1.463737D+01	-1.288282D+00	-1.489457D-01	4.016231D-01	5.920441D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
7.819297D+03	3.450698D+02	1.750109D+02	1.494862D+03	7.653115D+02
1.037006D+04	4.877192D+02	7.700752D+01	1.713912D+03	2.965685D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.235369D+04	-7.284667D+02	7.986937D+02	-7.188243D+02	6.209876D+02
1.764610D+04	2.123280D-30	-7.284667D+02	7.986937D+02	8.870234D+02
XR	L/DE	SHPTOT	WFF	NMLB
1.812121D+04	1.042380D+00	1.608011D+03	1.609011D+03	9.322497D-03
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LANDAR
5.841923D-02	5.556814D-02	3.434633D-03	6.517902D-01	-4.422810D-02
5.841923D-02	7.415426D-02	4.906056D-03	6.536461D-01	-5.110664D-02
MUF	VF	DFFR	DFF	AOF
MUR	VR	DFRF		AOR
3.589068D-02	2.241737D+01	3.394354D-01	1.355813D+00	2.958646D+00
3.589012D-02	2.715141D+01	2.760905D-01		4.094814D+00
A1F	B1F	BETA0F	B180F	A270F
A1R	B1R	BETA0R	B180R	A270R
1.222484D+00	-2.438108D+00	1.682016D+00	4.168962D+00	3.194547D+00
-4.986008D-01	2.780890D+00	4.583475D+00	3.585224D+00	4.621817D+00
CAPVF	ALPHA F	BETAFW	AT1FF	BPTPF
CAPVR	ALPHA R	BETARW	AT1PR	BPTPR
2.677011D+01	-1.905716D+01	2.695240D+02	2.617225D+02	2.727423D+00
2.681338D+01	-1.932558D+01	2.696485D+02	2.625014D+02	2.825234D+00

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMTF	CTFP	A90F
RMTR	CTRP	A90RA
6.081536D-01	5.319648D-02	2.416042D+00
6.046754D-01	7.052159D-02	3.415617D+00

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
0.0	6.209876D+02	1.608011D+03	9.322497D-03
0.0	8.870234D+02	1.609011D+03	1.631437D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

V	RC	GW	RHO	XF	LW
FE	ALPHA	ALFF	THETA	LF	LW
1.500000D+01	0.0	1.750000D+04	2.378000D-03	2.185004D+03	
4.400000D+01	-9.000000D+01	-9.000000D+01	5.699297D+00	7.522716D+03	
VTF	CGF	BETAF	PSI	XR	LW
VTR	CGL	PHI	GAMMA	LR	LW
7.050000D+02	-2.190042D+01	9.000000D+01	-9.000000D+01	2.965052D+03	
7.050000D+02	0.0	2.635444D+00	0.0	9.943689D+03	
THEOF	AICF	BITF	BICF	DFW	
THEOR	AICR	BITR	BICR	LFFW	
1.390824D+01	1.725540D+00	-2.500000D+00	-2.500000D+00	7.260419D+02	
1.532818D+01	3.127114D-01	-2.500000D+00	-2.500000D+00	-2.912189D-12	
THETAC	DELTAB	DELTAS	DELTAR	DELTAC	
1.461821D+01	-1.111065D+00	4.757617D-01	3.845339D-01	5.905586D+00	
TF	HF	YF	MHF	LHF	
TR	HR	YR	MHR	LHR	
7.825275D+03	3.613499D+02	1.561517D+02	1.686340D+03	7.259932D+02	
1.036632D+04	4.559484D+02	1.738742D+02	1.475041D+03	5.471968D+02	
QF	LFZ	YFY	LF	RHPF	
QR	DFX	MF	NF	RHPR	
1.258733D+04	-7.260419D+02	-7.894347D+02	7.104913D+02	6.327322D+02	
1.719939D+04	2.116213D-30	-7.260419D+02	-7.894347D+02	8.645681D+02	
XR	L/DE	SHPTOT	WFF	NMLB	
1.812221D+04	1.057085D+00	1.597300D+03	1.598300D+03	9.384970D-03	
SIGOF	CISF	CPSF	AMIF	LAMDAF	
SIGOR	CISR	CPSR	AMTR	LAMDAR	
5.841923D-02	5.531057D-02	3.499592D-03	6.534319D-01	-4.413295D-02	
5.841923D-02	7.334416D-02	4.781858D-03	6.506654D-01	-5.100591D-02	
MUF	VF	DFFR	DF	A0F	
MUR	VR	DFRF		A0R	
3.589851D-02	2.245585D+01	3.396796D-01	1.355024D+00	2.958566D+00	
3.589805D-02	2.717926D+01	2.762761D-01		4.036610D+00	
A1F	B1F	BETA0F	B180F	A270F	
A1R	B1R	BETA0R	B180R	A270R	
-1.199453D+00	2.730116D+00	4.150218D+00	1.749758D+00	3.303106D+00	
8.751503D-01	-2.400562D+00	3.151904D+00	4.904132D+00	4.423306D+00	
CAPVF	ALPHAF	BETAFM	ATIPF	BPTPF	
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR	
2.674114D+01	-1.884005D+01	9.043177D+01	2.593005D+02	2.981982D+00	
2.678613D+01	-1.912221D+01	9.031882D+01	2.638752D+02	2.555110D+00	

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTF	CTFP	A90F	
RMTB	CTRP	A90RA	
6.062901D-01	5.333331D-02	2.372362D+00	
6.081584D-01	7.049713D-02	3.455885D+00	

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SNPTOT	NMLB
DELHPR	RHPR	WFF	RP
0.0	6.327322D+02	1.597300D+03	9.384970D-03
0.0	8.645681D+02	1.598300D+03	1.642370D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

PAGE 3

CASE 20

V	RC	GM	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
3.000000D+01	0.0	1.750000D+04	2.378000D-03	5.991335D+02
4.400000D+01	-9.000000D+01	-9.000000D+01	5.799040D+00	8.005480D+03
VTF	CGF	BEIAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	-2.190042D+01	9.000000D+01	-9.000000D+01	1.189312D+03
7.050000D+02	0.0	4.388175D+00	0.0	1.052536D+04
THEOF	AICF	BIIF	BICF	DFW
THEOR	AICR	BITR	BICR	LEFW
1.313126D+01	2.085373D+00	-2.500000D+00	-2.500000D+00	1.168550D+03
1.461379D+01	-1.955758D-01	-2.500000D+00	-2.500000D+00	-2.853024D-12
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.387253D+01	-1.160033D+00	7.517824D-01	3.459736D-01	5.327539D+00
IF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
8.019090D+03	3.753207D+02	1.361271D+02	1.772107D+03	6.591059D+02
1.058252D+04	4.558786D+02	1.985623D+02	1.346046D+03	6.157497D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.059925D+04	-1.168550D+03	-1.270579D+03	1.143521D+03	5.327966D+02
1.466929D+04	6.812003D-30	-1.168550D+03	-1.270579D+03	7.373866D+02
XR	L/DE	SNPTOT	WFF	NMLB
1.853026D+04	-4.785329D+00	1.370183D+03	1.371183D+03	2.187891D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	5.693748D-02	2.948856D-03	6.758756D-01	-3.241357D-02
5.841923D-02	7.555962D-02	4.078427D-03	6.730374D-01	-4.097182D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
7.166507D-02	1.667846D+01	2.444997D-01	8.910065D-01	2.970464D+00
7.166246D-02	2.094948D+01	1.118913D-01		4.087642D+00
AIF	BIF	BEIAOF	B180F	A270F
AIR	BIR	BEIAOR	B180R	A270R
-1.106572D+00	2.864723D+00	4.034853D+00	1.836808D+00	3.560631D+00
9.793400D-01	-2.195295D+00	3.082903D+00	5.042019D+00	4.847617D+00
CAPVF	ALPHA	BETAOF	ATIPF	BTIPF
CAPVR	ALPHAR	BETARW	ATIPR	BTIPR
5.089892D+01	-6.959743D+00	9.072525D+01	2.593934D+02	3.071016D+00
5.113963D+01	-8.913475D+00	9.055553D+01	2.639793D+02	2.403835D+00

PAGE 4

CASE 20

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTR	CTFP	A90F	
5.830936D-01	CTRP	A90RA	
5.852849D-01	5.675593D-02	1.809021D+00	
	7.462095D-02	2.831431D+00	

NON UNIFORM DOWNWASH POWER CORRECTIONS			
DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
9.730699D-01	5.337697D+02	1.372436D+03	2.184303D-02
1.279362D+00	7.386660D+02	1.373436D+03	3.822531D+02

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
5.439174D+02	1.499900D+04	1.092210D+05	1.032000D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
8.747909D-03	2.445392D-01	6.071387D-02	7.608552D-01
-1.936989D-02	1.105021D+00	-9.352563D-02	-6.165626D-02
5.672737D-02	-5.170540D-02	-5.354798D-02	1.805688D-01
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
-7.446681D-02	2.666869D-01	1.471122D-01	-7.484126D+00
2.175978D-01	1.731695D+00	9.195705D-01	6.926328D-01
-6.051875D-01	-2.586472D-01	-9.655346D-02	-1.926372D+00
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
1.329173D-03	-1.305240D-02	3.548285D-01	8.566959D-02
-1.849596D-02	-9.216277D-01	-2.040282D-02	-5.887448D-02
8.154296D-03	-2.234112D-01	-1.347079D-01	2.595593D-02
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
-4.672437D-01	-1.468429D+00	8.212456D-02	-2.745448D-01
-8.102513D-02	1.521565D-01	9.391771D-01	-2.579110D-01
2.362053D-02	-2.219254D-01	-2.397130D-01	7.582311D-02
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
1.657743D-02	-7.958263D-01	-4.241148D-03	-6.013970D-02
-4.132126D-03	1.559404D-01	3.780017D-01	-1.315296D-02
-3.227668D-03	-6.290152D-02	-1.933731D-01	-1.027399D-02
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
-1.720252D-03	3.207079D-02	2.912759D-02	4.493989D-04
-5.223082D-04	-1.439098D-01	1.135838D-02	-1.662559D-03
1.080177D-03	-4.235433D-02	1.300902D-01	3.438310D-03

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	0.107D-04	0.757D-02	0.679D-04	0.216D-03	0.127D-02	0.385D-01
CTR	0.688D-05	0.485D-02	0.634D-04	0.202D-03	0.912D-03	0.381D-01
CHF	0.173D-05	0.122D-02	0.339D-05	0.188D-04	0.196D-03	0.190D-02
CHR	0.227D-05	0.160D-02	0.283D-05	0.902D-05	0.156D-03	0.153D-02
ALF	0.897D-03	0.633D+00	0.298D-03	0.948D-03	0.342D-01	0.184D+00
ALR	0.884D-03	0.623D+00	0.241D-03	0.767D-03	0.341D-01	0.182D+00
VFR	0.613D-01	0.432D+02	0.405D+00	0.129D+01	0.762D+01	0.169D+03
VRR	0.374D-01	0.263D+02	0.390D+00	0.124D+01	0.584D+01	0.148D+03
LF			0.134D+02	0.426D+02		
DF			0.167D-30	0.531D-30		
MF			0.134D+02	0.426D+02		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.172D-05	0.548D-05	0.132D-03	0.497D-04	0.337D-02
CYR	0.211D-05	0.672D-05	0.201D-03	0.310D-06	0.465D-02
B1F	0.337D-04	0.107D-03	0.366D-01	0.500D-02	0.658D-02
B1R	0.127D-03	0.405D-03	0.363D-01	0.235D-03	0.274D-01
YF	-0.348D+02	0.111D+03			
LF	0.313D+02	0.997D+02			
NF	-0.348D+02	0.111D+03			
CTF					-0.419D-02
CTR					0.465D-02

FORCE = 0.241446D+07

X	BICF	BICR	OMEGAF	OMEGAR
Z	0.151D+02	0.200D+02	0.0	0.0
M	0.209D+01	0.238D+01	0.0	0.0
Y	-0.907D+00	-0.114D+01	0.0	0.0
L	0.241D+00	-0.389D+00	0.0	0.0
N	0.870D-01	-0.188D+00	0.0	0.0
	0.301D-01	0.313D-01	0.0	0.0
CTF	0.107D-03	-0.893D-06	0.0	0.0
CTR	-0.998D-05	-0.184D-04	0.0	0.0
CHF	-0.342D-02	-0.266D-06	0.0	0.0
CHR	-0.438D-06	-0.454D-02	0.0	0.0
AIF	-0.600D-02	-0.989D-04	0.0	0.0
AIR	-0.109D-04	0.301D-01	0.0	0.0
VFR	0.515D+00	0.289D-01	0.0	0.0
VRR	-0.617B-01	0.199D-01	0.0	0.0
QF	0.112D+00	-0.821D-03	0.0	0.0
QR	0.946D-03	-0.126D+00	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELR	QFALPHA
	-0.378D-03	0.321D+00	0.450D+00	0.918D+00
	-0.339D-02	0.138D+01	0.812D-02	-0.108D-01
	-0.403D-02	-0.229D+00	0.128D-01	-0.128D-01
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELR	QRALPHA
	-0.651D-03	-0.774D+00	-0.590D+00	0.122D+01
	-0.202D-02	0.122D+01	0.115D-01	-0.643D-02
	-0.702D-02	0.358D+00	-0.261D-01	-0.224D-01

V	RC	GN	RHO	XF LM
FE	ALPHA	ALFF	THETA	LF LM
4.500000D+01	0.0	1.750000D+04	2.378000D-03	1.097586D+03
4.400000D+01	-9.000000D+01	-9.000000D+01	6.221596D+00	8.464118D+03
VTF	CGF	BETAF	PSI	XR LM
VTR	CGL	PHI	GAMMA	LR LM
7.050000D+02	-2.190042D+01	9.000000D+01	-9.000000D+01	1.715455D+03
7.050000D+02	0.0	9.177925D+00	0.0	1.101763D+04
THEOF	AICF	BITF	BICF	DFW
THEOR	AICR	BITR	BICR	LFFW
1.373781D+01	2.593670D+00	-2.500000D+00	-2.500000D+00	2.411831D+03
1.498672D+01	-5.143075D-01	-2.500000D+00	-2.500000D+00	-2.944253D-12
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.436226D+01	-9.772339D-01	1.036656D+00	3.640635D-01	5.707182D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
8.525726D+03	3.974884D+02	1.287155D+02	1.849457D+03	6.287247D+02
1.114081D+04	4.617371D+02	2.844036D+02	1.211426D+03	8.100856D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.197897D+04	-2.411831D+03	-2.622415D+03	2.360174D+03	6.021515D+02
1.567836D+04	1.757456D-29	-2.411831D+03	-2.622415D+03	7.881102D+02
XR	L/DE	SHPTOT	WFF	NMLB
1.958845D+04	-1.987736D+00	1.490262D+03	1.491262D+03	3.017579D-02
SIGOF	CISF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	5.995580D-02	3.330452D-03	6.978493D-01	-3.646484D-02
5.841923D-02	7.899286D-02	4.358975D-03	6.951687D-01	-4.358616D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
1.064653D-01	1.239290D+01	2.317396D-01	7.532682D-01	3.173073D+00
1.064481D-01	1.583287D+01	8.644438D-02		4.294391D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
-1.100521D+00	2.976007D+00	4.250939D+00	2.025280D+00	4.370331D+00
1.276473D+00	-1.992811D+00	3.007947D+00	5.5223	5.734691D+00
CAPVF	ALPHAF	BETAFV	ATIPF	BPTPF
CAPVR	ALPHAR	BETARV	ATIPR	BPTPR
7.622953D+01	-1.005794D+01	9.152585D+01	2.593995D+02	3.172974D+00
7.650905D+01	-1.122324D+01	9.112679D+01	2.642765D+02	2.366576D+00

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTR	CTFP	A90F	
5.609222D-01	CTR	A90RA	
5.631288D-01	6.000751D-02	1.695655D+00	
	7.811096D-02	2.553916D+00	

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHTOT	NMLB
DELHPR	RHPR	WFF	RP
2.716878D+00	6.048684D+02	1.496515D+03	3.004978D-02
3.536523D+00	7.916467D+02	1.497515D+03	5.258712D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

CATALOG OF TRIM & STABILITY DERIVATIVE DATA

A-97 TRIM ANALYSIS (CH-46E)

GW = 17,500 lb CG = 40 in. fwd

<u>ALTITUDE</u>	<u>AIRSPEED</u>	<u>CLIMB RATE</u>	<u>SIDESLIP</u>	<u>DERIVATIVES</u>
0 ft	-40 kt	0 ft/min	0 deg	X
	-20			
	0			X
	20			
	40			X
	60			
	80			X
	100			
	120			X
	140			
	146			X

V	RC	GM	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
-4.00000D+01	0.0	1.75000D+04	2.37800D-03	3.019673D+03
4.40000D+01	1.884216D+02	1.998873D+02	8.489539D+00	9.988034D+03
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.05000D+02	3.809958D+01	0.0	0.0	3.025670D+01
7.05000D+02	0.0	-1.600389D-01	0.0	7.538163D+03
THEOF	AICF	BITF	BICF	DFW
THEOR	AICR	BITR	BICR	LFFW
1.572961D+01	-1.261619D+00	-2.50000D+00	-2.50000D+00	2.988240D+02
1.203218D+01	-2.135190D+00	-2.50000D+00	-2.50000D+00	4.586112D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.388089D+01	2.893135D+00	2.902626D-01	-7.130912D-01	5.334026D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.043393D+04	1.109179D+02	-2.842139D+02	4.196611D+02	-1.158014D+03
7.536593D+03	1.567690D+02	-3.034675D+02	8.451883D+02	-1.590791D+03
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.823702D+04	-4.974307D+02	3.049647D+01	1.078744D+02	9.167270D+02
7.969512D+03	-2.284354D+02	5.399274D+03	-3.424166D+02	4.006065D+02
XR	L/DE	SHPTOT	WFF	NMLB
2.582264D+02	-1.483425D+00	1.417334D+03	1.418334D+03	2.820211D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	7.376079D-02	5.070345D-03	6.910431D-01	-5.225937D-02
5.841923D-02	5.331267D-02	2.215723D-03	6.910450D-01	-2.022791D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
9.580941D-02	1.562747D+01	9.626581D-08	1.012396D+00	4.068107D+00
9.579689D-02	1.258439D+01	1.785696D+00		2.672930D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
-6.806535D-01	1.880824D+00	4.664222D+00	3.332933D+00	5.669518D+00
-1.373452D+00	2.583226D+00	4.000426D+00	1.262810D+00	3.252506D+00
CAPVF	ALPHAF	BETAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
7.079660D+01	-1.743065D+01	1.799772D+02	1.782410D+02	2.000197D+00
6.755760D+01	-1.421613D+00	1.799772D+02	1.800482D+02	2.925650D+00

PROG. A97 EP04280D3

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMTF	CTFP	A90F
RMTR	CIRP	A90RA
5.682412D-01	7.081152D-02	2.616984D+00
5.682454D-01	5.344282D-02	1.211261D+00

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	NFF	RP
0.0	9.167270D+02	1.417334D+03	-2.820211D-02
0.0	4.006065D+02	1.418334D+03	-4.935370D+02

STABILITY DERIVATIVES OUTPUT

MASS			
5.439174D+02	1.499900D+04	IYY	IZZ
		1.139350D+05	1.079530D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-6.539333D-02	4.099489D-01	3.272649D-01	8.939143D-01
-8.833915D-04	5.13824D-01	-4.899983D-03	-1.440202D-03
4.958865D-02	-3.047565D-01	-2.510945D-02	8.084488D-02
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
2.625270D-01	-4.489856D+00	-1.188235D+00	-6.175786D+00
-2.800219D-04	3.049429D+00	-7.659071D-03	-4.565226D-04
-4.786508D-01	9.242786D-01	-3.870672D-02	-7.803493D-01
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-1.432290D-03	2.716318D-01	4.090984D-01	-2.592012D-01
2.464554D-03	-1.208013D+00	2.243245D-03	4.017988D-03
-2.955650D-02	-2.581782D-01	1.567343D-03	-4.818626D-02
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
-1.431382D-04	-1.430537D+00	-1.897443D-01	1.106626D-01
5.508306D-02	1.625982D-01	9.058242D-01	8.980248D-02
1.204362D-02	-4.131996D-02	2.436822D-01	1.963484D-02
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
-1.737967D-04	-6.740914D-01	-9.346490D-02	2.078222D-02
-1.091544D-03	2.118409D-01	3.488514D-01	-1.779555D-03
4.306521D-03	2.069046D-04	-5.531881D-02	7.020965D-03
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
5.550977D-04	-4.185958D-02	3.463103D-02	-1.498677D-03
-2.207968D-03	-1.510140D-01	1.253229D-02	-3.599672D-03
-7.257619D-04	-4.854839D-02	1.184490D-01	-1.183217D-03

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	-0.389D-04	-0.275D-01	0.191D-04	0.312D-04	-0.200D-02	0.214D-01
CTR	-0.225D-04	-0.159D-01	0.809D-04	0.132D-03	0.132D-02	0.424D-01
CHF	0.211D-05	0.148D-02	0.403D-06	0.657D-06	-0.148D-03	-0.502D-03
CHR	0.705D-06	0.497D-03	0.138D-05	0.225D-05	-0.139D-03	0.274D-03
ALF	-0.592D-03	-0.417D+00	-0.183D-04	-0.299D-04	0.673D-01	0.198D+00
AIR	-0.350D-03	-0.247D+00	0.199D-03	0.325D-03	0.766D-01	0.259D+00
VFR	0.514D-02	0.362D+01	0.113D+00	0.184D+00	-0.856D+01	0.455D+02
VRR	0.783D-01	0.552D+02	0.371D+00	0.604D+00	0.577D+01	0.165D+03
LF			0.203D+02	0.331D+02		
DF			0.192D+00	0.313D+00		
MF			-0.173D+03	-0.283D+03		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.228D-05	-0.372D-05	-0.165D-03	-0.296D-04	0.447D-02
CYR	0.119D-05	0.193D-05	0.157D-03	-0.203D-04	0.318D-02
B1F	0.662D-03	0.108D-02	0.733D-01	0.164D-01	-0.103D+01
B1R	-0.652D-03	-0.106D-02	-0.725D-01	-0.790D-03	-0.102D+01
YF	0.383D+02	0.625D+02			
LF	0.664D+02	0.108D+03			
NF	-0.206D+03	-0.336D+03			
CTF					0.104D-03
CTR					0.829D-04

FORCE = 0.241466D+07

PR06. A97 EP04280D3

X	BICF	BICR	OMEGAF	OMEGAR
Z	0.0	0.0	0.0	0.0
M	0.0	0.0	0.0	0.0
Y	0.0	0.0	0.0	0.0
L	0.0	0.0	0.0	0.0
N	0.0	0.0	0.0	0.0
CTF	0.0	0.0	0.0	0.0
CTR	0.0	0.0	0.0	0.0
CHF	0.0	0.0	0.0	0.0
CHR	0.0	0.0	0.0	0.0
AIF	0.0	0.0	0.0	0.0
AIR	0.0	0.0	0.0	0.0
VFR	0.0	0.0	0.0	0.0
VRR	0.0	0.0	0.0	0.0
QF	0.0	0.0	0.0	0.0
QR	0.0	0.0	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELR	QFALPHA
	-0.241D-02	-0.439D+00	0.759D+00	0.137D+01
	0.336D-03	-0.310D+00	0.867D-02	0.548D-03
	0.326D-02	-0.654D+00	0.121D-01	0.531D-02
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELR	QRALPHA
	0.676D-02	0.108D+01	-0.329D+00	0.668D+00
	0.913D-03	0.128D-01	-0.412D-02	0.149D-02
	-0.188D-01	0.312D+00	0.718D-02	-0.307D-01

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V	RC	GN	RHO	XF	
FE	A PHA	ALFF	THETA	LW	
-2.00000D+01	0.0	1.75000D+04	2.37800D-03	LF	5.846776D+03
4.40000D+01	1.870352D+02	2.22766D+02	7.103045D+00	LW	8.583952D+03
VTF	CGF	BETAF	PSI	XR	
VTR	CGL	PHI	GAMMA	LW	
7.05000D+02	3.809958D+01	0.0	0.0	LW	-2.335680D+02
7.05000D+02	0.0	-1.256409D-01	0.0		7.558063D+03
THEOF	AICF	B1TF	B1CF	DFW	
THEOR	AICR	B1TR	B1CR	LFFW	
1.662148D+01	-1.581122D+00	-2.50000D+00	-2.50000D+00		1.218582D+02
1.279729D+01	-2.506109D+00	-2.50000D+00	-2.50000D+00		4.575135D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC	
1.470939D+01	2.992320D+00	2.902158D-01	-8.578217D-01		5.976268D+00
TF	HF	YF	MHF	LHF	
TR	HR	YR	MHR	LHR	
1.038209D+04	2.849400D+02	-3.236915D+02	9.806496D+02		-1.218827D+03
7.557919D+03	2.382123D+02	-3.527482D+02	1.154814D+03		-1.718296D+03
QF	LFZ	YFY	LF	RHPF	
QR	DFX	MF	NF	RHPR	
2.154534D+04	-4.491445D+02	1.091260D+01	4.651632D+01		1.083028D+03
9.879244D+03	-6.735441D+01	3.751760D+03	-2.350362D+02		4.966037D+02
XR	L/DE	SHPTOT	WFF	NMLB	
8.104580D+01	-6.379997D-01	1.679631D+03	1.680631D+03		1.190029D-02
SIGOF	CISF	CPSF	AMTF	LAMDAF	
SIGOR	CISR	CPSR	AMTR	LAMDAR	
5.841923D-02	7.369175D-02	5.990140D-03	6.607799D-01		-6.453478D-02
5.841923D-02	5.353508D-02	2.746676D-03	6.608468D-01		-3.080582D-02
MUF	VF	DFFR	DFF	A0F	
MUR	VR	DFRF		A0R	
4.786886D-02	2.111245D+01	3.718316D-08	1.255350D+00		4.160158D+00
4.791318D-02	2.169717D+01	1.188855D+00			2.766614D+00
A1F	B1F	BETA0F	B180F	A270F	
A1R	B1R	BETA0R	B180R	A270R	
-1.591936D+00	1.979754D+00	5.773733D+00	2.556451D+00		5.120495D+00
-1.876067D+00	2.790544D+00	4.617025D+00	8.757774D-01		2.995270D+00
CAPVF	ALPHA F	BETAFW	AT1PF	BPTPF	
CAPVR	ALPHA R	BETARW	AT1PR	BPTPR	
4.162577D+01	-3.583201D+01	1.799854D+02	1.759433D+02		2.540411D+00
3.377880D+01	-3.520783D-02	1.799854D+02	1.781591D+02		3.362553D+00

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMTR	CTFP	A90F
5.996279D-01	CTRP	A90RA
5.988055D-01	6.085709D-02	3.595503D+00
	5.358391D-02	1.869622D+00

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	NFF	RP
0.0	1.083028D+03	1.679631D+03	-1.190029D-02
0.0	4.966037D+02	1.680631D+03	-2.082551D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

V	RC	GM	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
0.0	0.0	1.750000D+04	2.378000D-03	1.044473D+04
4.400000D+01	0.0	2.700000D+02	6.080074D+00	4.516169D+02
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	3.809958D+01	0.0	0.0	7.698259D+03
7.050000D+02	0.0	-1.336795D-01	0.0	3.474366D+02
THEOF	AICF	B1TF	B1CF	DFW
THEOR	AICR	B1TR	B1CR	LFFW
1.528849D+01	-5.976773D-01	-2.500000D+00	-2.500000D+00	-3.001968D-14
1.392025D+01	-1.055005D+00	-2.500000D+00	-2.500000D+00	-6.558026D+02
THEIAC	DELIAB	DELIAS	DELTAR	DELTAC
1.460437D+01	1.070606D+00	1.530075D-01	-3.466204D-01	5.894861D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.044473D+04	4.516169D+02	-1.122267D+02	1.577366D+03	-3.407801D+02
7.698259D+03	3.474366D+02	-1.532290D+02	1.567969D+03	-7.284287D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.716799D+04	-6.558026D+02	-1.466136D-14	-7.418808D-14	8.629900D+02
1.259249D+04	-3.001968D-14	2.623211D+03	4.819681D-13	6.329916D+02
XR	L/DE	SHPTOT	WFF	NMLB
1.871790D+03	0.0	1.595982D+03	1.596982D+03	0.0
SIGOF	CTSF	CPSF	AMTF	LAMDAR
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	7.372661D-02	4.773130D-03	6.316145D-01	-5.024936D-02
5.841923D-02	5.431251D-02	3.501027D-03	6.315247D-01	-4.578521D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF	DFR	AOR
3.544064D-19	3.399307D+01	1.406733D-01	1.299000D+00	3.968679D+00
1.182887D-18	2.749568D+01	5.209670D-02		2.931868D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B18OR	A27OR
2.561952D+00	-5.533178D-01	1.547159D+00	6.559368D+00	3.930133D+00
2.5466679D+00	-1.182801D+00	3.380098D-01	5.468527D+00	2.795987D+00
CAPVF	ALPHAF	BEIAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
1.432718D+00	2.700000D+02	0.0	-6.938048D+00	2.621022D+00
4.781919D+00	2.700000D+02	0.0	-4.453321D+00	2.807951D+00

CASE 2

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTF	CTFP	A90F	
RMTR	CTRP	A90RA	
6.295653D-01	3.201799D-03	3.807194D+00	
6.303396D-01	2.463199D-03	2.819192D+00	

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
0.0	8.629900D+02	1.595982D+03	0.0
0.0	6.329916D+02	1.596982D+03	0.0

MAIN
ENTRY POINT= 000B5E58
STANDARD FIXUP TAKEN , EXECUTION CONTINUING

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
5.439174D+02	1.499900D+04	1.139350D+05	1.079530D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-2.024110D-02	-4.993699D+00	9.180524D-02	7.901756D-01
-4.208212D-04	9.791062D-01	-4.785076D-03	-1.339516D-03
1.542129D-01	-1.749108D-01	-2.584427D-02	4.908750D-01
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
1.201191D-02	5.361661D+01	-4.662344D-02	-7.598239D+00
2.644276D-03	-4.007550D-01	-7.224329D-03	8.416991D-03
-1.842112D+00	2.901904D-01	-4.579740D-03	-5.863625D+00
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-6.689125D-04	5.546158D+00	3.174897D-01	-7.962490D-02
8.866019D-04	-5.648577D-01	-2.632735D-04	2.822142D-03
-1.487681D-01	-2.001905D-01	1.689774D-03	-4.735635D-01
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
5.175245D-04	-1.753853D+00	-6.739637D-02	2.661687D-02
-2.857946D-01	-1.624813D-01	9.152516D-01	-9.097126D-01
4.284316D-02	-9.154405D-02	2.159834D-01	1.363740D-01
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
1.058520D-04	-1.063890D+00	-6.111064D-02	-4.824957D-03
3.279965D-03	9.988249D-02	3.535249D-01	1.044045D-02
2.472621D-02	-9.591594D-03	-6.462400D-02	7.870596D-02
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
1.229368D-04	2.986737D-01	4.095401D-02	-1.219457D-03
5.310390D-03	-1.533278D-01	1.059346D-02	1.690350D-02
-1.487876D-02	-4.803755D-02	1.200670D-01	-4.736055D-02

LONGITUDINAL

	U	MU	W	ALPHA	Q	THEYAC
CTF	-0.348D-05	-0.245D-02	0.364D-04	0.116D-03	-0.055D-03	0.410D-01
CTR	-0.120D-05	-0.849D-03	0.392D-03	0.125D-02	0.754D-03	0.383D-01
CHF	0.189D-05	0.133D-02	0.192D-05	0.611D-05	-0.168D-03	0.184D-02
CHR	0.126D-05	0.889D-03	0.173D-04	0.549D-04	-0.637D-04	0.172D-02
ALF	0.893D-02	0.629D+01	0.893D-02	0.284D-01	-0.732D-01	0.402D-02
AIR	0.887D-02	0.626D+01	0.892D-02	0.284D-01	-0.739D-01	0.445D-02
VFR	-0.935D-01	-0.659D+02	0.563D+00	0.179D+01	-0.901D+01	0.163D+03
VRR	-0.544D-01	-0.384D+02	0.255D+01	0.812D+01	0.120D+02	0.169D+03
LF			-0.296D+02	-0.941D+02		
DF			-0.135D-14	-0.431D-14		
MF			0.118D+03	0.376D+03		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.205D-05	-0.651D-05	-0.143D-03	-0.396D-04	0.444D-02
CYR	0.129D-05	0.412D-05	0.252D-03	-0.190D-04	0.330D-02
BIF	0.893D-02	0.284D-01	-0.716D-01	-0.147D-01	0.103D+01
BIR	-0.888D-02	-0.283D-01	0.733D-01	0.436D-03	0.103D+01
YF	-0.147D+03	-0.469D+03			
LF	0.133D+03	0.422D+03			
NF	0.590D+03	0.188D+04			
CTF					0.488D-05
CTR					-0.244D-05

FORCE = 0.241446D+07

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X	BICF	BICR	OMEGAF	OMEGAR
Z	0.0	0.0	0.0	0.0
M	0.0	0.0	0.0	0.0
Y	0.0	0.0	0.0	0.0
L	0.0	0.0	0.0	0.0
N	0.0	0.0	0.0	0.0
CTF	0.0	0.0	0.0	0.0
CTR	0.0	0.0	0.0	0.0
CHF	0.0	0.0	0.0	0.0
CHR	0.0	0.0	0.0	0.0
AIF	0.0	0.0	0.0	0.0
AIR	0.0	0.0	0.0	0.0
VFR	0.0	0.0	0.0	0.0
VRR	0.0	0.0	0.0	0.0
QF	0.0	0.0	0.0	0.0
QR	0.0	0.0	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELR	QFALPHA
	-0.571D-03	-0.243D+00	0.720D+00	0.143D+01
	0.362D-04	0.117D+01	-0.323D-04	0.115D-03
	0.457D-02	-0.510D+00	-0.879D-04	0.145D-01
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELR	QRALPHA
	-0.235D-03	-0.822D+01	-0.546D+00	0.111D+01
	-0.234D-03	0.141D+01	0.227D-02	-0.745D-03
	0.347D+00	0.353D+00	-0.291D-03	0.111D+01

V	RC	GN	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
2.00000D+01	0.0	1.75000D+04	2.37800D-03	2.320829D+02
4.40000D+01	4.751073D+00	-3.625093D+01	4.809105D+00	1.025323D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	3.809958D+01	0.0	-1.550715D-02	3.996940D+03
7.050000D+02	0.0	-1.922659D-01	0.0	6.434470D+03
THEOF	AICF	B1TF	BICF	DFW
THEOR	AICR	B1TR	BICR	LFFW
1.435532D+01	2.443050D-01	-2.500000D+00	-2.500000D+00	3.644641D+01
1.462658D+01	-9.263466D-02	-2.500000D+00	-2.500000D+00	-3.235199D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.449095D+01	-2.122592D-01	1.135013D-01	2.485908D-02	5.806938D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.023725D+04	6.175742D+02	4.303960D+01	2.069294D+03	2.439179D+02
7.560995D+03	4.574715D+02	-7.302820D+00	2.043836D+03	-3.286403D+00
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.394035D+04	-3.193895D+02	9.714641D+00	3.973887D+01	7.007451D+02
1.419366D+04	6.311732D+01	-3.079042D+02	-1.854832D+02	7.134782D+02
XR	L/DE	SHPTOT	WFF	NMLB
7.166556D+01	7.118588D-01	1.514223D+03	1.515223D+03	1.319937D-02
SIGOF	CISF	CPSF	AMTF	LAMDAF
SIGOR	CISR	CPSR	AMTR	LANDAR
5.841923D-02	7.297343D-02	3.875766D-03	6.624753D-01	-4.150355D-02
5.841923D-02	5.343375D-02	3.946192D-03	6.639011D-01	-5.738026D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
4.774871D-02	2.645517D+01	8.535803D-01	1.278322D+00	3.950973D+00
4.787629D-02	1.651225D+01	6.599722D-39		2.931525D+00
A1F	B1F	BETAOF	B180F	A270F
A1R	B1R	BETAOR	B180R	A270R
3.361747D+00	3.960417D-01	5.900162D-01	7.301423D+00	4.363483D+00
3.320343D+00	-5.335984D-03	-4.284881D-01	6.236607D+00	3.610018D+00
CAPVF	ALPHAF	BETAFW	AT1PF	BPTPF
CAPVR	ALPHAR	BETARW	AT1PR	BPTPR
3.377880D+01	-4.748927D+00	3.600000D+02	-1.387180D+00	3.384995D+00
4.136183D+01	-3.530998D+01	3.600000D+02	1.071415D+00	3.320347D+00

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CASE 2

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMTR	CTFP	A90F
5.988139D-01	CTR	A90RA
5.996213D-01	7.269167D-02	2.964479D+00
	4.561804D-02	2.411997D+00

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
0.0	7.007451D+02	1.514223D+03	1.319937D-02
0.0	7.134782D+02	1.515223D+03	2.309891D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

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V	RC	GM	RHO	XF LM
FE	ALPHA	ALFF	THETA	LF LM
4.000000D+01	0.0	1.750000D+04	2.378000D-03	3.402373D+02
4.000000D+01	3.362516D+00	-8.972910D+00	3.408402D+00	1.011052D+04
VT	CGF	BETAF	PSI	XR LM
VTR	CGL	PHI	CANNA	LR LM
7.050000D+02	3.809958D+01	0.0	-1.276625D-02	2.526216D+03
7.050000D+02	0.0	-2.219548D-01	0.0	7.139989D+03
THEOF	AICF	BIF	BICF	DFW
THEOR	AICR	BITR	BICR	LEFW
1.340768D+01	5.770070D-01	-2.500000D+00	-2.500000D+00	2.285003D+02
1.439793D+01	4.265780D-01	-2.500000D+00	-2.500000D+00	-1.822558D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.390280D+01	-1.291271D+00	5.213430D-02	2.012060D-01	5.351011D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.008894D+04	7.426744D+02	1.092148D+02	2.488153D+03	5.931004D+02
7.552682D+03	5.640948D+02	7.080684D+01	2.482289D+03	4.257083D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.070134D+04	-1.685397D+02	3.057796D+01	9.107663D+01	5.379281D+02
1.351058D+04	2.387968D+02	-1.058502D+03	-7.993410D+01	6.791415D+02
XR	L/DE	SHPTOT	WFF	NMLB
2.564468D+02	1.672068D+00	1.317070D+03	1.318070D+03	3.034741D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	7.216816D-02	2.975238D-03	6.929207D-01	-3.342629D-02
5.841923D-02	5.328758D-02	3.756278D-03	6.950348D-01	-5.777145D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
9.527713D-02	1.633983D+01	1.553762D+00	1.066922D+00	3.822721D+00
9.563333D-02	1.105008D+01	6.134715D-41		2.898525D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
4.043256D+00	9.630357D-01	-2.554322D-01	7.826518D+00	4.733708D+00
4.033711D+00	6.912201D-01	-1.190242D+00	6.893714D+00	4.159422D+00
CAPVF	ALPHA	BETAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
6.755760D+01	-6.137484D+00	3.600000D+02	-2.094228D+00	4.156363D+00
7.366290D+01	-2.375579D+01	3.600000D+02	3.962274D-01	4.092507D+00

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMIF	CTFP	A90F
RMTR	CTRP	A90RA
5.688119D-01	7.167988D-02	2.076855D+00
5.691264D-01	5.061991D-02	1.823236D+00

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
2.573214D+00	5.405013D+02	1.321460D+03	3.024666D-02
1.817188D+00	6.809587D+02	1.322460D+03	5.293166D+02

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CASE 3

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
5.439174D+02	1.499900D+04	1.139350D+05	1.079530D+05
XU	XP	XDEL4	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-1.803434D-02	2.481571D-01	3.288911D-02	3.903857D-01
-4.628347D-04	1.271820D+00	-8.470218D-03	-3.126980D-02
4.498504D-02	-9.301403D-02	-2.714897D-02	3.039256D+00
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
-1.523795D-01	-8.392008D+00	9.229131D-01	-6.971821D+00
1.059610D-02	-3.912429D+00	-3.774242D-03	7.158884D-01
-7.210730D-01	-4.824419D-01	1.079350D-02	-4.871676D+01
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-5.904856D-03	-6.839480D-01	4.211921D-01	3.903773D-02
3.208968D-04	-1.198037D+00	-1.535829D-03	2.168021D-02
-3.834337D-03	-2.530636D-01	7.909597D-04	-2.590535D-01
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
1.255004D-03	-1.391075D+00	6.099103D-02	2.651437D-02
-7.222822D-02	-3.402073D-01	8.904501D-01	-4.879954D+00
1.117049D-03	-1.738289D-01	2.051926D-01	7.546947D-02
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
2.647901D-04	-6.819795D-01	-1.216036D-02	-2.401072D-03
-8.096158D-03	6.135569D-03	3.479001D-01	-5.469884D-01
1.600148D-03	-2.995955D-02	-6.488067D-02	1.081084D-01
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
-1.332568D-04	-3.177343D-02	3.347829D-02	6.168506D-04
7.252198D-04	-1.346581D-01	9.913767D-03	4.899693D-02
-1.019305D-03	-4.092953D-02	1.167909D-01	-6.886576D-02

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	0.980D-05	0.691D-02	0.837D-04	0.566D-02	0.104D-02	0.430D-01
CTR	0.232D-04	0.163D-01	0.718D-04	0.485D-02	0.198D-02	0.279D-01
CHF	0.251D-05	0.177D-02	0.701D-05	0.474D-03	0.297D-03	0.406D-02
CHR	0.305D-05	0.215D-02	0.542D-05	0.366D-03	0.764D-04	0.264D-02
ALF	0.404D-03	0.285D+00	0.289D-03	0.195D-01	0.747D-01	0.263D+00
ALR	0.429D-03	0.303D+00	0.237D-03	0.160D-01	0.686D-01	0.227D+00
VFR	-0.175D+00	-0.124D+03	0.340D+00	0.230D+02	-0.479D+01	0.156D+03
VRR	-0.277D-01	-0.195D+02	0.277D+00	0.187D+02	0.814D+01	0.782D+02
LF			0.164D+02	0.111D+04		
DF			0.342D+00	0.231D+02		
MF			0.280D+02	0.189D+04		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.176D-05	-0.119D-03	-0.207D-03	-0.514D-04	0.431D-02
CYR	0.134D-05	0.903D-04	0.107D-03	-0.123D-04	0.323D-02
B1F	0.667D-03	0.451D-01	-0.705D-01	-0.125D-01	0.103D+01
B1R	-0.672D-03	-0.454D-01	0.779D-01	-0.141D-02	0.103D+01
YF	-0.318D+02	-0.215D+04			
LF	-0.419D+02	-0.283D+04			
NF	0.824D+02	0.557D+04			
CTF					-0.729D-04
CTR					-0.819D-05

FORCE = 0.241446D+07

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X	BICF	BICR	OMEGAF	OMEGAR
Z	0.0	0.0	0.0	0.0
M	0.0	0.0	0.0	0.0
Y	0.0	0.0	0.0	0.0
L	0.0	0.0	0.0	0.0
N	0.0	0.0	0.0	0.0
CTF	0.0	0.0	0.0	0.0
CTR	0.0	0.0	0.0	0.0
CHF	0.0	0.0	0.0	0.0
CHR	0.0	0.0	0.0	0.0
AIF	0.0	0.0	0.0	0.0
AIR	0.0	0.0	0.0	0.0
VFR	0.0	0.0	0.0	0.0
VRR	0.0	0.0	0.0	0.0
QF	0.0	0.0	0.0	0.0
QR	0.0	0.0	0.0	0.0
QFU	QFDEL	QFP	QFDELB	QFDELTAC
QFV	QFQ	QFQ	QFDELS	QFBETA
QFW	QFR	QFR	QFDELR	QFALPHA
	-0.612D-02	0.216D+00	0.440D+00	0.894D+00
	0.731D-04	0.284D+01	-0.722D-02	0.494D-02
	-0.291D-01	-0.249D+00	-0.980D-02	-0.197D+01
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELR	QRALPHA
	0.537D-02	0.279D+00	-0.664D+00	0.110D+01
	-0.208D-03	0.285D+01	0.384D-02	-0.141D-01
	0.254D-01	0.356D+00	-0.507D-02	0.171D+01

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CASE 3

V	RC	GM	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
6.000000D+01	0.0	1.750000D+04	2.378000D-03	5.050885D+02
4.400000D+01	1.681682D+00	-3.625458D+00	1.718275D+00	1.001403D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	3.809958D+01	0.0	-7.052404D-03	1.361055D+03
7.050000D+02	0.0	-2.445004D-01	0.0	7.464215D+03
THEOF	AICF	B1TF	B1CF	DFW
THEOR	AICR	B1TR	B1CR	LFFW
1.323945D+01	2.283657D-01	-2.500000D+00	-2.500000D+00	5.380245D+02
1.355260D+01	1.689957D-01	-2.500000D+00	-2.500000D+00	-1.006197D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.339603D+01	-1.606535D+00	2.109638D-02	7.641958D-02	4.958159D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
9.989655D+03	8.618389D+02	5.599614D+01	2.901327D+03	5.148429D+02
7.559551D+03	6.481981D+02	3.591885D+01	2.796705D+03	3.649538D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
9.863906D+03	-8.478712D+01	5.584674D+01	1.669863D+02	4.958327D+02
1.133070D+04	5.407457D+02	-1.826308D+03	2.795142D+00	5.695645D+02
XR	L/DE	SHPTOI	WFF	NMLB
5.603674D+02	3.035671D+00	1.165397D+03	1.166397D+03	5.144045D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	7.115041D-02	2.742412D-03	7.232453D-01	-3.535411D-02
5.841923D-02	5.380493D-02	3.150216D-03	7.248346D-01	-5.053046D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
1.424034D-01	1.113914D+01	1.623750D+00	9.741242D-01	3.731737D+00
1.431208D-01	8.143564D+00	6.122041D-41		2.831280D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
4.716077D+00	8.359568D-01	-1.073853D+00	8.359870D+00	5.351046D+00
4.545650D+00	5.925695D-01	-1.788465D+00	7.302020D+00	4.460342D+00
CAPVF	ALPHAF	BETAFW	AT1FF	BPTFF
CAPVR	ALPHAR	BETARW	AT1PR	BPTPR
1.013364D+02	-7.818318D+00	3.600000D+02	-3.102242D+00	4.789593D+00
1.045753D+02	-1.523488D+01	3.600000D+02	-7.726682D-01	4.584111D+00

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CASE 3

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTF	CTFP	A90F	
RMTB	CTRP	A90RA	
5.395725D-01	7.099584D-02	1.477889D+00	
5.395136D-01	5.291856D-02	1.197784D+00	

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	NFF	RP
7.512434D+00	5.033452D+02	1.178509D+03	5.086861D-02
5.599584D+00	5.751641D+02	1.179509D+03	8.902008D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

V	RC	GW	RHO	XF LM
FE	ALPHA	ALFF	THETA	LF LM
8.000000D+01	0.0	1.750000D+04	2.378000D-03	7.450074D+02
4.400000D+01	1.239683D+00	-1.670778D+00	1.298156D+00	1.009131D+04
VTF	CGF	BETAF	PSI	XR LM
VTR	CGL	PHI	GAMMA	LR LM
7.050000D+02	3.809958D+01	0.0	-6.166608D-03	1.002038D+03
7.050000D+02	0.0	-2.895751D-01	0.0	7.346712D+03
THEOF	AICF	BITF	BICF	DFW
THEOR	AICR	BITR	BICR	LEFW
1.372871D+01	-2.088987D-01	-8.000000D-01	-8.000000D-01	9.589286D+02
1.342738D+01	-2.327000D-01	-8.000000D-01	-8.000000D-01	-1.283976D+00
THEIAC	DELIAB	DELTAS	DELTAR	DELTAC
1.357804D+01	-1.704746D+00	4.404580D-03	-1.042552D-01	5.099258D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.009366D+04	7.125487D+02	-3.017687D+00	2.330312D+03	3.880651D+02
7.398164D+03	4.954027D+02	-8.696718D+00	2.074644D+03	2.283379D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.095937D+04	1.946261D+01	8.413272D+01	2.623484D+02	5.508989D+02
1.079104D+04	9.587319D+02	-2.862493D+03	6.871527D+01	5.424372D+02
XR	L/DE	SHPTOT	WFF	NMLB
9.946395D+02	4.530211D+00	1.193336D+03	1.194336D+03	6.698282D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	7.131621D-02	3.046978D-03	7.520076D-01	-3.961682D-02
5.841923D-02	5.254344D-02	3.000177D-03	7.531565D-01	-4.786743D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
1.896645D-01	8.517628D+00	1.647000D+00	9.354278D-01	3.731134D+00
1.906850D-01	6.156793D+00	2.721243D-41		2.698029D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
3.786378D+00	6.300965D-01	-2.141135D-01	7.360188D+00	6.322570D+00
3.370450D+00	3.707445D-01	-8.107408D-01	5.939408D+00	4.914860D+00
CAPVF	ALPHA F	BETA F W	ATIP F	BPTIP F
CAPVR	ALPHA R	BETA R W	ATIP R	BPTIP R
1.351152D+02	-8.260317D+00	3.600000D+02	-4.473939D+00	3.838448D+00
1.372348D+02	-1.159777D+01	3.600000D+02	-2.389867D+00	3.390779D+00

CASE 4

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTR	CTFP	A90F	
5.093695D-01	CTR	A90RA	
5.094602D-01	7.154372D-02	1.099825D+00	
	5.208550D-02	7.405840D-01	

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
1.615743D+01	5.670563D+02	1.221256D+03	6.545271D-02
1.176299D+01	5.542002D+02	1.222256D+03	1.145422D+03

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STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
5.439174D+02	1.499900D+04	1.139350D+05	1.079530D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-3.804332D-02	-6.625055D-02	1.527140D-02	3.918850D-01
-6.683406D-04	1.519239D+00	-1.157637D-02	-9.032101D-02
5.275706D-02	-1.068324D-01	-3.836138D-02	7.129704D+00
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
-2.811370D-02	-2.557822D+00	8.780963D-01	-8.656375D+00
6.318435D-03	-4.509540D+00	1.553291D-02	8.538872D-01
-8.452095D-01	-3.836125D-01	4.963103D-02	-1.142235D+02
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-4.835478D-03	-2.916078D-02	4.890095D-01	3.609783D-02
7.198799D-04	-1.380922D+00	-4.869957D-03	9.728615D-02
3.907169D-04	-2.574957D-01	7.869225D-04	5.273477D-02
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
2.263468D-03	-1.382841D+00	1.609893D-02	1.604348D-02
-1.180493D-01	-2.371122D-01	8.821685D-01	-1.595344D+01
-3.063630D-03	-1.545805D-01	2.099570D-01	-4.140257D-01
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
2.140625D-04	-6.569827D-01	-8.340908D-03	-4.662149D-04
-7.560960D-03	-2.257552D-02	3.454377D-01	-1.021805D+00
1.168534D-03	-2.785932D-02	-6.176757D-02	1.579183D-01
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
5.420424D-05	-3.289116D-02	2.557713D-02	-7.151742D-04
-7.111457D-04	-1.006618D-01	9.947663D-03	-9.610579D-02
-1.105471D-03	-3.994284D-02	1.154045D-01	-1.493958D-01

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	-0.475D-05	-0.335D-02	0.101D-03	0.137D-01	-0.121D-02	0.520D-01
CTR	0.933D-05	0.653D-02	0.759D-04	0.103D-01	0.229D-02	0.355D-01
CNF	0.129D-05	0.910D-03	0.911D-05	0.123D-02	-0.317D-03	0.563D-02
CHR	0.181D-05	0.128D-02	0.546D-05	0.737D-03	0.495D-04	0.343D-02
AIF	0.339D-03	0.239D+00	0.631D-03	0.853D-01	-0.792D-01	0.570D+00
AIR	0.363D-03	0.256D+00	0.468D-03	0.632D-01	-0.602D-01	0.477D+00
VFR	-0.706D-01	-0.498D+02	0.206D+00	0.279D+02	-0.253D+01	0.105D+03
VRR	-0.238D-01	-0.168D+02	0.153D+00	0.207D+02	0.478D+01	0.688D+02
LF			0.313D+02	0.423D+04		
DF			-0.745D+00	-0.101D+03		
MF			0.767D+02	0.104D+05		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.178D-05	-0.240D-03	-0.196D-03	-0.465D-04	0.428D-02
CYR	0.120D-05	0.162D-03	0.116D-03	-0.117D-04	0.317D-02
BIF	0.107D-03	0.145D-01	-0.679D-01	-0.124D-01	0.102D+01
BIR	-0.110D-03	-0.149D-01	0.729D-01	-0.199D-03	0.103D+01
YF	-0.570D+02	-0.771D+04			
LF	-0.385D+02	-0.520D+04			
NF	-0.644D+02	-0.871D+04			
CTF					-0.192D-03
CTR					-0.952D-04

FORCE = 0.241446D+07

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CASE 4

X	BICF	BICR	OMEGAF	OMEGAR
Z	0.0	0.0	0.0	0.0
M	0.0	0.0	0.0	0.0
Y	0.0	0.0	0.0	0.0
L	0.0	0.0	0.0	0.0
H	0.0	0.0	0.0	0.0
CTF	0.0	0.0	0.0	0.0
CTR	0.0	0.0	0.0	0.0
CHF	0.0	0.0	0.0	0.0
CHR	0.0	0.0	0.0	0.0
AIF	0.0	0.0	0.0	0.0
AIR	0.0	0.0	0.0	0.0
VFR	0.0	0.0	0.0	0.0
QF	0.0	0.0	0.0	0.0
QR	0.0	0.0	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELR	QFALPHA
	-0.279D-02	-0.244D+00	0.375D+00	0.768D+00
	-0.205D-03	0.331D+01	-0.160D-01	-0.277D-01
	-0.385D-01	-0.338D+00	-0.152D-01	-0.520D+01
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELR	QRALPHA
	-0.218D-02	0.136D+00	-0.437D+00	0.876D+00
	0.521D-04	0.226D+01	0.565D-02	0.705D-02
	0.151D-02	0.293D+00	-0.964D-02	0.204D+00

V	RC	GM	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
1.000000D+02	0.0	1.750000D+04	2.378000D-03	1.043168D+03
4.400000D+01	9.174792D-01	-9.200951D-01	9.592383D-01	1.021937D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	3.809958D+01	0.0	-5.791454D-03	9.575784D+02
7.050000D+02	0.0	-3.725719D-01	0.0	7.124969D+03
THEOF	AICF	B1TF	B1CF	DFW
THEOR	AICR	B1TR	B1CR	LEFW
1.482660D+01	-7.569536D-01	1.600000D+00	1.600000D+00	1.497656D+03
1.394875D+01	-7.401281D-01	1.600000D+00	1.600000D+00	1.077043D+02
THEIAC	DELTAB	DELTAS	DELTAR	DELTAC
1.438768D+01	-1.644879D+00	1.110037D-03	-3.050084D-01	5.726881D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.026061D+04	4.935879D+02	-7.042201D+01	1.499530D+03	2.940193D+02
7.183466D+03	2.827551D+02	-6.131239D+01	1.002000D+03	4.452496D+01
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.372089D+04	1.316715D+02	1.262133D+02	3.748623D+02	6.897131D+02
1.165705D+04	1.495740D+03	-4.22024D+03	1.507363D+02	5.859695D+02
XR	L/DE	SHPTOT	WFF	NMLB
1.523170D+03	5.918734D+00	1.375683D+03	1.376683D+03	7.263838D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAR
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	7.309889D-02	3.814749D-03	7.805413D-01	-4.563124D-02
5.841923D-02	5.093316D-02	3.240951D-03	7.815045D-01	-4.846917D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
2.368833D-01	6.965305D+00	1.642539D+00	9.181167D-01	3.844913D+00
2.382173D-01	4.833829D+00	2.719573D-41		2.607182D+00
ALF	B1F	BETAOF	B180F	A270F
AIR	B1R	BETAOR	B18OR	A27OR
2.435452D+00	4.773914D-01	1.125692D+00	6.018618D+00	7.759010D+00
1.627120D+00	7.229318D-02	7.588333D-01	4.035990D+00	5.610122D+00
CAPVF	ALPHA	BETAFW	AT1PF	BPTPF
CAPVR	ALPHAR	BETARW	AT1PR	BPTPR
1.688940D+02	-8.582521D+00	3.600000D+02	-6.147069D+00	2.481799D+00
1.704863D+02	-9.908655D+00	3.600000D+02	-4.455401D+00	1.628725D+00

PAGE 4

CASE 4

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMTF	CTFP	A90F
RMTR	CTRP	A90RA
4.792631D-01	7.245160D-02	8.397314D-01
4.797714D-01	5.051343D-02	4.603497D-01

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
3.136176D+01	7.210748D+02	1.428910D+03	6.993448D-02
2.186549D+01	6.078350D+02	1.429910D+03	1.223853D+03

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

V	RC	GW	RH0	XF LW
FE	ALPHA	ALFF	THETA	LF LW
1.200000D+02	0.0	1.750000D+04	2.378000D-03	1.362026D+03
4.400000D+01	-8.202620D-01	-2.119458D+00	-7.491455D-01	1.042229D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	3.809958D+01	0.0	7.186156D-03	1.156934D+03
7.050000D+02	0.0	-5.315157D-01	0.0	7.044546D+03
THEOF	AICF	B1TF	B1CF	DFW
THEOR	AICR	B1TR	B1CR	LFFW
1.628127D+01	-1.106976D+00	2.800000D+00	2.800000D+00	2.160043D+03
1.543417D+01	-1.066799D+00	4.000000D+00	4.000000D+00	-1.273596D+01
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.585772D+01	-2.013223D+00	-4.560567D-03	-4.749086D-01	6.866453D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.049768D+04	5.271638D+02	-1.078741D+02	1.550207D+03	2.307513D+02
7.137715D+03	1.309856D+02	-8.387011D+01	1.855962D+02	-4.777795D+01
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.763298D+04	-4.365736D+01	1.953469D+02	6.152081D+02	8.863637D+02
1.454902D+04	2.159639D+03	-6.652002D+03	1.192976D+02	7.313413D+02
XR	L/DE	SHPTOT	WFF	NMLB
2.203458D+03	7.119796D+00	1.717705D+03	1.718705D+03	6.982001D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	7.452819D-02	4.902407D-03	8.096709D-01	-5.992881D-02
5.841923D-02	5.077206D-02	4.044991D-03	8.101249D-01	-5.786045D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
2.828282D-01	5.940928D+00	1.547617D+00	9.232462D-01	4.003679D+00
2.848055D-01	4.020465D+00	9.470078D-12		2.671497D+00
A1F	B1F	BETA0F	B180F	A270F
A1R	B1R	BETA0R	B180R	A270R
2.517812D+00	3.746631D-01	9.601776D-01	6.065906D+00	9.295299D+00
3.013456D-01	-7.757492D-02	1.969303D+00	2.628331D+00	6.763493D+00
CAPVF	ALPHA F	BETA F W	ATIPF	BPTPF
CAPVR	ALPHA R	BETA R W	ATIPR	BPTPR
2.026728D+02	-1.032026D+01	5.919537D-19	3.521975D+02	2.545535D+00
2.041272D+02	-1.037782D+01	5.878440D-19	3.524811D+02	3.111705D-01

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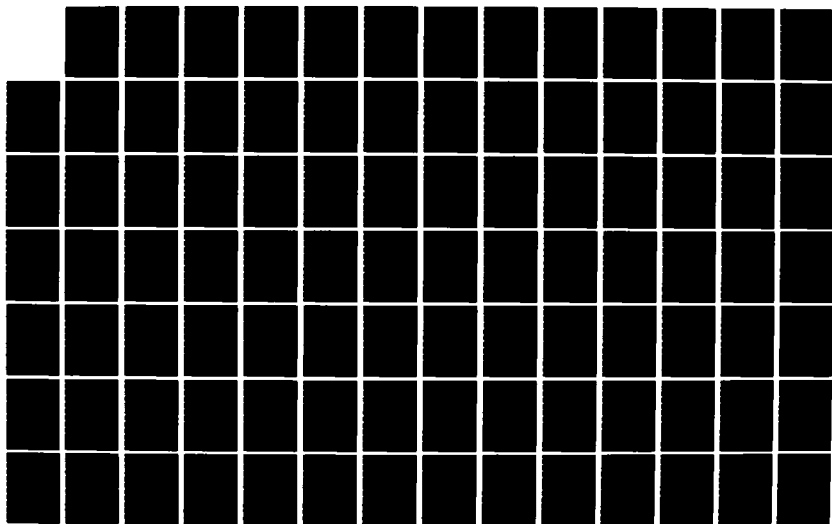
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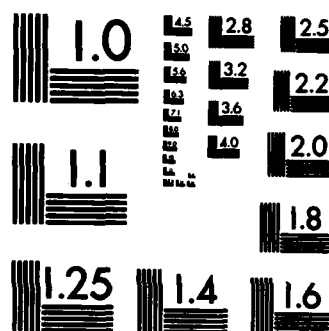
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UNCLASSIFIED

F/G 1/2

NL





MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

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CASE 5

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTF	CTFP	A90F	
RMTF	CTRP	A90RA	
4.501878D-01	7.389022D-02	6.346258D-01	
4.514089D-01	4.994326D-02	3.350206D-01	

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	HMLB
DELHPR	RHPR	NFF	RP
5.227055D+01	9.386342D+02	1.805306D+03	6.643393D-02
3.533028D+01	7.666716D+02	1.806306D+03	1.162594D+03

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
5.439174D+02	1.499900D+04	1.139350D+05	1.079530D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-5.931663D-02	-2.325311D-01	-1.110331D-01	7.745879D-01
-1.387739D-03	1.549155D+00	-5.807490D-02	-2.812900D-01
8.411453D-02	-4.999175D-02	-3.469245D-02	1.704973D+01
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
4.886873D-02	-1.017726D+00	6.942976D-01	-1.033364D+01
7.777420D-03	-5.308903D+00	5.168368D-02	1.576456D+00
-9.652077D-01	-3.523414D-01	9.774665D-02	-1.956443D+02
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-1.943347D-03	2.422828D-01	5.311457D-01	-2.158118D-02
2.220609D-03	-1.446860D+00	-1.090515D-02	4.501099D-01
-3.457224D-03	-3.028976D-01	5.294720D-04	-7.007675D-01
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
4.126647D-03	-7.613066D-01	-4.042463D-02	-1.502104D-02
-1.717711D-01	-1.347778D-01	8.911759D-01	-3.481741D+01
-8.215730D-03	-8.529003D-02	2.708490D-01	-1.665301D+00
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
7.167791D-04	-4.510087D-01	-3.277533D-02	-1.506062D-02
-1.023471D-02	7.179055D-03	3.400379D-01	-2.074540D+00
5.735090D-04	3.957699D-03	-4.814764D-02	1.162483D-01
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
-1.9334415D-05	-6.050250D-02	4.323725D-02	7.372167D-05
-1.231372D-03	-1.156623D-01	1.125448D-02	-2.495950D-01
-1.509819D-03	-6.484705D-02	1.176509D-01	-3.060352D-01

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	-0.107D-04	-0.752D-02	0.108D-03	0.219D-01	-0.120D-02	0.587D-01
CTR	-0.231D-05	-0.163D-02	0.896D-04	0.182D-01	0.246D-02	0.462D-01
CMF	0.138D-05	0.971D-03	0.830D-05	0.168D-02	-0.249D-03	0.551D-02
CNR	0.118D-05	0.831D-03	0.207D-05	0.420D-03	-0.254D-05	0.212D-02
ALF	0.350D-03	0.247D+00	0.101D-02	0.205D+00	-0.855D-01	0.897D+00
ALR	0.334D-03	0.236D+00	0.824D-03	0.167D+00	-0.545D-01	0.782D+00
VFR	-0.437D-01	-0.308D+02	0.148D+00	0.301D+02	-0.170D+01	0.798D+02
VRR	-0.223D-01	-0.157D+02	0.122D+00	0.247D+02	0.341D+01	0.621D+02
LF			0.488D+02	0.990D+04		
DF			-0.103D+01	-0.208D+03		
MF			0.116D+03	0.235D+05		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.225D-05	-0.455D-03	-0.129D-03	-0.440D-04	0.454D-02
CYR	0.138D-05	0.279D-03	0.423D-04	-0.248D-04	0.311D-02
B1F	-0.241D-03	-0.489D-01	-0.648D-01	-0.148D-01	0.103D+01
B1R	0.344D-03	0.698D-01	0.688D-01	0.246D-02	0.103D+01
YF	-0.847D+02	-0.172D+05			
LF	-0.639D+02	-0.129D+05			
NF	-0.116D+03	-0.235D+05			
CTF					-0.352D-03
CTR					-0.194D-03

FORCE = 0.241446D+07

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CASE 5

X	BICF	BICR	OMEGAF	OMEGAR
Z	0.0	0.0	0.0	0.0
M	0.0	0.0	0.0	0.0
Y	0.0	0.0	0.0	0.0
L	0.0	0.0	0.0	0.0
N	0.0	0.0	0.0	0.0
CTF	0.0	0.0	0.0	0.0
CTR	0.0	0.0	0.0	0.0
CHF	0.0	0.0	0.0	0.0
CHR	0.0	0.0	0.0	0.0
AIF	0.0	0.0	0.0	0.0
AIR	0.0	0.0	0.0	0.0
VFR	0.0	0.0	0.0	0.0
VRR	0.0	0.0	0.0	0.0
QF	0.0	0.0	0.0	0.0
QR	0.0	0.0	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELR	QFALPHA
	-0.731D-02	-0.561D+00	0.651D+00	0.144D+01
	-0.470D-04	0.238D+01	-0.150D-01	-0.952D-02
	-0.240D-02	-0.684D+00	-0.297D-01	-0.486D+00
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELR	QRALPHA
	-0.323D-02	0.418D+00	-0.721D+00	0.124D+01
	-0.111D-02	0.161D+01	0.118D-01	-0.224D+00
	0.333D-01	0.598D+00	-0.160D-01	0.674D+01

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V	RC	GN	RHO	XF	LW
FE	ALPHA	ALFF	THETA	LF	LW
1.400000D+02	0.0	1.750000D+04	2.378000D-03	1.832983D+03	
4.400000D+01	-4.654071D+00	-5.685397D+00	-4.633928D+00	1.083607D+04	
VTF	CGF	BETAF	PSI	XR	LW
VTR	CGL	PHI	GAMMA	LR	LW
7.050000D+02	3.809958D+01	0.0	7.744074D-02	1.398740D+03	
7.050000D+02	0.0	-9.739055D-01	0.0	7.418053D+03	
THEOF	AICF	BITF	BICF	DFW	
THEOR	AICR	BITR	BICR	LEFW	
1.843516D+01	-1.626318D+00	2.800000D+00	2.800000D+00	3.003843D+03	
1.731866D+01	-1.665459D+00	4.000000D+00	4.000000D+00	-7.949971D+02	
THETAC	DELTAB	DELTAS	DELTAR	DELTAC	
1.787691D+01	-2.131067D+00	2.546934D-02	-6.963381D-01	8.431714D+00	
TF	HF	YF	MHF	LHF	
TR	HR	YR	MHR	LHR	
1.095533D+04	8.724102D+02	-1.958261D+02	2.666822D+03	1.221057D+02	
7.540761D+03	3.477252D+02	-1.508957D+02	1.125288D+03	-2.695063D+02	
QF	LFZ	YFY	LF	RHPF	
QR	DFX	MF	NF	RHPR	
2.487235D+04	-1.036106D+03	3.473176D+02	9.796502D+02	1.250268D+03	
1.883677D+04	2.929433D+03	-1.105815D+04	-2.593265D+02	9.468749D+02	
XR	L/DE	SHPTOT	WFF	NMLB	
3.015677D+03	7.518445D+00	2.297143D+03	2.298143D+03	6.091876D-02	
SIGOF	CISF	CPSF	AMTF	LAMDAF	
SIGOR	CISR	CPSR	AMTR	LAMDAR	
5.841923D-02	7.762523D-02	6.915132D-03	8.391549D-01	-8.956195D-02	
5.841923D-02	5.333631D-02	5.237090D-03	8.390249D-01	-8.292821D-02	
MUF	VF	DFFR	DF	A0F	
MUR	VR	DFRF		A0R	
3.252104D-01	5.321604D+00	1.326201D+00	9.541740D-01	4.286222D+00	
3.284782D-01	3.643105D+00	1.530955D-38		2.892154D+00	
AIF	BIF	BETA0F	B180F	A270F	
AIR	BIR	BETA0R	B180R	A270R	
4.334131D+00	1.982579D-01	-7.287466D-01	8.052114D+00	1.174656D+01	
1.827388D+00	-4.375895D-01	5.386475D-01	4.285781D+00	8.662170D+00	
CAPVF	ALPHAF	BETAFM	ATIPF	BPTPF	
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR	
2.364516D+02	-1.415407D+01	9.609768D-18	3.501801D+02	4.338663D+00	
2.379776D+02	-1.331845D+01	9.514165D-18	3.501733D+02	1.879051D+00	

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CASE 5

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMTR	CTFP	A90F
RMTR	CTRP	A90RA
4.231903D-01	7.682380D-02	5.233886D-01
4.238069D-01	5.259129D-02	2.666361D-01

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELMPF	RHPF	SNPTOT	NMLB
DELMPR	RHPR	MFF	RP
7.584201D+01	1.326110D+03	2.424904D+03	5.771045D-02
5.191918D+01	9.987941D+02	2.425904D+03	1.009933D+03

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

V	RC	GN	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
1.460000D+02	0.0	1.750000D+04	2.378000D-03	2.017279D+03
4.400000D+01	-5.953024D+00	-6.933801D+00	-5.920690D+00	1.105254D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	3.809958D+01	0.0	1.118625D-01	1.510558D+03
7.050000D+02	0.0	-1.092902D+00	0.0	7.596817D+03
THEOF	AICF	B1TF	B1CF	DFW
THEOR	AICR	B1TR	B1CR	LFFW
1.925630D+01	-1.828829D+00	2.800000D+00	2.800000D+00	3.311022D+03
1.805591D+01	-1.964676D+00	4.000000D+00	4.000000D+00	-1.191079D+03
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.865611D+01	-2.159320D+00	3.746481D-02	-7.608761D-01	9.035743D+00
TF	HF	YF	MNF	LNF
TR	HR	YR	MHR	LHR
1.119048D+04	1.000576D+03	-2.411354D+02	3.085795D+03	1.209745D+02
7.733495D+03	4.318172D+02	-1.876287D+02	1.479720D+03	-3.158117D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
2.835211D+04	-1.528051D+03	3.898269D+02	1.123176D+03	1.425186D+03
2.067011D+04	3.169636D+03	-1.275567D+04	-5.442835D+02	1.039032D+03
XR	L/DE	SHPTOT	MFF	NMLB
3.329929D+03	7.323792D+00	2.564218D+03	2.565218D+03	5.691524D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	7.954685D-02	7.882591D-03	8.480004D-01	-1.005951D-01
5.841923D-02	5.461517D-02	5.746805D-03	8.476124D-01	-9.287115D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
3.371220D-01	5.217305D+00	1.268166D+00	9.660697D-01	4.444286D+00
3.408662D-01	3.585140D+00	1.521019D-38	2.997098D+00	
AIF	BIF	BETAOF	B18OF	A27OF
AIR	BIR	BETAOR	B18OR	A27OR
5.016673D+00	1.964213D-01	-1.339790D+00	8.825733D+00	1.265237D+01
2.403260D+00	-5.127761D-01	-3.699741D-03	4.914570D+00	9.343144D+00
CAPVF	ALPHA	BETAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
2.465852D+02	-1.545302D+01	6.445013D-18	3.495636D+02	5.020516D+00
2.481521D+02	-1.444198D+01	6.374218D-18	3.494502D+02	2.457356D+00

CASE 6

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3

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMIF	CTFP	A90F	
RMIR	CTRP	A90RA	
4.154477D-01	7.835845D-02	5.153429D-01	
4.159585D-01	5.385866D-02	2.664991D-01	

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	NFF	RP
8.325194D+01	1.508438D+03	2.704692D+03	5.396031D-02
5.722214D+01	1.096254D+03	2.705692D+03	9.443055D+02

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
5.439174D+02	1.499900D+04	1.139350D+05	1.079530D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-6.706691D-02	-3.495084D-01	-1.749075D-02	4.351453D-01
-8.952552D-04	3.302035D-01	-5.966683D-03	-2.196091D-01
6.051945D-02	-7.576874D-02	-2.484753D-02	1.484563D+01
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
4.305857D-02	-2.233441D-01	5.543540D-01	-1.151418D+01
1.546354D-02	-5.844163D+00	2.592633D-02	3.793259D+00
-1.050929D+00	-4.364220D-01	1.707113D-01	-2.577963D+02
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-1.142495D-03	3.644417D-01	5.444523D-01	-5.002461D-02
3.991184D-03	-1.391333D+00	-1.205417D-02	9.790510D-01
-4.918649D-03	-3.861715D-01	7.023573D-04	-1.206561D+00
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
4.568529D-03	-3.927256D-02	-1.653901D-01	-3.610083D-02
-2.188591D-01	4.040247D-01	9.846542D-01	-5.368688D+01
-1.437483D-02	8.453579D-02	2.794815D-01	-3.526194D+00
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
3.894093D-04	-2.505006D-01	-1.004962D-01	-3.309894D-02
-1.557186D-02	2.649160D-01	3.708524D-01	-3.819830D+00
-3.707670D-03	9.601626D-02	-5.679063D-02	-9.095040D-01
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
7.050107D-05	-6.248519D-02	8.038743D-02	2.295421D-03
8.165848D-04	-2.365908D-01	1.270266D-02	2.003110D-01
-2.434090D-05	-1.014318D-01	1.286038D-01	-5.970905D-03

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	-0.737D-05	-0.520D-02	0.111D-03	0.271D-01	-0.114D-02	0.625D-01
CTR	-0.232D-05	-0.164D-02	0.976D-04	0.240D-01	0.248D-02	0.541D-01
CHP	0.149D-05	0.105D-02	0.104D-04	0.254D-02	-0.985D-04	0.826D-02
CHR	0.140D-05	0.985D-03	0.686D-05	0.149D-02	0.138D-03	0.446D-02
ALF	0.439D-05	0.310D+00	0.125D-02	0.307D+00	-0.880D-01	0.112D+01
AIR	0.330D-05	0.275D+00	0.109D-02	0.266D+00	-0.507D-01	0.103D+01
VRR	-0.292D-05	-0.206D+02	0.126D+00	0.309D+02	-0.136D+01	0.698D+02
LF	-0.169D-01	-0.119D+02	0.111D+00	0.271D+02	0.283D+01	0.599D+02
DF			0.683D+02	0.167D+05		
MF			0.723D+00	0.177D+03		
			0.127D+03	0.313D+05		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.292D-05	-0.716D-03	-0.228D-04	-0.258D-04	0.489D-02
CYR	0.180D-05	0.442D-03	-0.139D-04	-0.448D-04	0.341D-02
BIF	-0.189D-03	-0.464D-01	-0.630D-01	-0.141D-01	0.104D+01
BIR	0.275D-03	0.674D-01	0.665D-01	-0.544D-03	0.104D+01
YF	-0.108D+03	-0.264D+05			
LF	-0.116D+03	-0.286D+05			
NF	0.884D+02	0.217D+05			
CTF					-0.545D-03
CTR					-0.383D-03

FORCE = 0.241446D+07

X	BICF	BICR	OMEGAF	OMEGAR
Z	0.0	0.0	0.0	0.0
M	0.0	0.0	0.0	0.0
Y	0.0	0.0	0.0	0.0
L	0.0	0.0	0.0	0.0
N	0.0	0.0	0.0	0.0
CTF	0.0	0.0	0.0	0.0
CHR	0.0	0.0	0.0	0.0
CHF	0.0	0.0	0.0	0.0
CHR	0.0	0.0	0.0	0.0
AIF	0.0	0.0	0.0	0.0
AIR	0.0	0.0	0.0	0.0
VRR	0.0	0.0	0.0	0.0
QF	0.0	0.0	0.0	0.0
QR	0.0	0.0	0.0	0.0
QFU	QFDELTAC	QFP	QFDELB	QFDELTAC
QFV	QFBETA	QFQ	QFDELS	QFBETA
QFN	QFALPHA	QFR	QFDELR	QFALPHA
	-0.588D-02	-0.969D+00	0.152D+01	0.268D+01
	0.447D-02	-0.170D+00	-0.188D-01	0.110D+01
	0.122D+00	-0.137D+01	-0.116D-01	0.299D+02
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBEIA
	QRW	QRR	QRDELR	QRALPHA
	-0.535D-02	0.440D+00	-0.113D+01	0.199D+01
	-0.321D-02	0.350D+01	0.210D-01	-0.787D+00
	0.733D-01	0.103D+01	-0.302D-01	0.180D+02

CATALOG OF TRIM & STABILITY DERIVATIVE DATA

A-97 TRIM ANALYSIS (CH-46E)

GW = 17,500 lb CG = 40 in. fwd

<u>ALTITUDE</u>	<u>AIRSPEED</u>	<u>CLIMB RATE</u>	<u>SIDESLIP</u>	<u>DERIVATIVES</u>
14000 ft	0 kt	0 ft/min	0 deg	X
	20			
	40			X
	60			
	80			X
	100			
	112			X

CASE 7

PAGE 3

V	RC	GM	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
0.0	0.0	1.750000D+04	1.546598D-03	1.044057D+04
4.400000D+01	0.0	2.700000D+02	5.978491D+00	4.726553D+02
VIF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	3.809958D+01	0.0	0.0	7.703515D+03
7.050000D+02	0.0	-1.630840D-01	0.0	3.470556D+02
THEOF	AICF	BIIF	BICF	DFW
THEOR	AICR	BITR	BICR	LFFW
1.833513D+01	-9.948705D-01	-2.500000D+00	-2.500000D+00	-3.003109D-14
1.632322D+01	-1.750437D+00	-2.500000D+00	-2.500000D+00	-6.560519D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.732917D+01	1.574258D+00	2.601887D-01	-5.957935D-01	8.007112D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.044057D+04	4.726553D+02	-2.000039D+02	1.591349D+03	-7.065319D+02
7.703515D+03	3.470556D+02	-2.517189D+02	1.558821D+03	-1.208159D+03
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
2.234690D+04	-6.560519D+02	-1.466693D-14	-7.421628D-14	1.123320D+03
1.461676D+04	-3.003109D-14	2.624208D+03	4.821513D-13	7.347461D+02
XR	L/DE	SHPTOT	WFF	NMLB
1.851371D+03	0.0	1.958066D+03	1.959066D+03	0.0
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	1.138682D-01	9.552906D-03	6.644327D-01	-6.230914D-02
5.841923D-02	8.428222D-02	6.248406D-03	6.643114D-01	-5.679239D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
4.396267D-19	4.215070D+01	1.406733D-01	1.299000D+00	4.144557D+00
1.466755D-18	3.410906D+01	5.209670D-02		3.009715D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
2.584678D+00	-1.147241D+00	1.530703D+00	6.726112D+00	6.285356D+00
2.531811D+00	-1.962016D+00	4.586972D-01	5.538137D+00	4.544285D+00
CAPVF	ALPHA	BETAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
1.777228D+00	2.700000D+02	0.0	-6.915322D+00	2.827847D+00
5.929480D+00	2.700000D+02	0.0	-4.468189D+00	3.203057D+00

CASE 7

PAGE 4

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMTR	CTFP	A90F
6.626567D-01	CTRP	A90RA
6.633885D-01	5.152322D-03	6.215567D+00
	3.783184D-03	4.578545D+00

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	NFF	RP

0.0	1.123320D+03	1.958066D+03	0.0
0.0	7.347461D+02	1.959066D+03	0.0

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
5.439174D+02	1.499900D+04	1.139350D+05	1.079530D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-2.472950D-02	-4.448357D+00	6.367016D-02	5.623069D-01
-2.799194D-04	1.416151D+00	-9.466269D-03	-8.910110D-04
1.127251D-01	-1.473997D-01	-5.304502D-02	3.588152D-01
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
5.988321D-03	4.689357D+01	-2.775982D-02	-5.411486D+00
2.993460D-03	-9.719121D-02	-2.683842D-03	9.528478D-03
-1.324068D+00	9.820924D-02	1.324987D-02	-4.214640D+00
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-1.172349D-05	4.881207D+00	2.250938D-01	-5.820496D-02
1.235899D-03	-4.566791D-01	3.546249D-04	3.933989D-03
-1.099517D-01	-2.231115D-01	5.060486D-03	-3.499872D-01
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
3.621909D-04	-2.710785D+00	-8.259853D-02	3.254067D-02
-2.851656D-01	-1.231713D-01	9.280419D-01	-9.077103D-01
4.259517D-02	-5.997824D-02	2.418509D-01	1.355846D-01
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
8.299962D-05	-1.532137D+00	-7.122089D-02	-4.088837D-03
6.634380D-04	1.125251D-01	3.570012D-01	2.111789D-03
2.263458D-02	2.428727D-02	-4.968480D-02	7.204812D-02
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
9.152291D-05	3.456249D-01	4.686454D-02	-2.096377D-03
5.089501D-03	-1.550130D-01	1.095944D-02	1.620038D-02
-1.272249D-02	-8.279679D-02	1.200475D-01	-4.049693D-02

LONGITUDINAL

	U	MU	M	ALPHA	Q	THETAC
CTF	-0.369D-05	-0.260D-02	0.377D-04	0.120D-03	-0.660D-03	0.447D-01
CTR	-0.123D-05	-0.868D-03	0.444D-03	0.141D-02	0.797D-03	0.421D-01
CHR	0.437D-05	0.308D-02	0.232D-05	0.737D-05	0.337D-03	0.202D-02
CHP	0.263D-05	0.186D-02	0.192D-04	0.611D-04	-0.171D-03	0.189D-02
ALF	0.889D-02	0.627D+01	0.889D-02	0.283D-01	-0.112D+00	0.322D-02
ALR	0.877D-02	0.618D+01	0.883D-02	0.281D-01	-0.112D+00	0.421D-02
VFR	-0.897D-01	-0.633D+02	0.520D+00	0.165D+01	0.876D+01	0.145D+03
VRR	-0.542D-01	-0.382D+02	0.345D+01	0.110D+02	0.115D+02	0.149D+03
LF			-0.352D+02	-0.112D+03		
DF			-0.161D-14	-0.513D-14		
MF			0.141D+03	0.448D+03		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.454D-05	-0.145D-04	-0.317D-03	-0.764D-04	0.695D-02
CYR	0.266D-05	0.848D-05	0.622D-03	-0.557D-04	0.498D-02
B1F	0.889D-02	0.283D-01	-0.109D+00	-0.213D-01	0.103D+01
B1R	-0.877D-02	-0.279D-01	0.110D+00	-0.155D-02	0.950D+00
YF	-0.144D+03	-0.458D+03			
LF	0.129D+03	0.412D+03			
NF	0.575D+03	0.183D+04			
CTF					0.257D-04
CTR					-0.205D-03

FORCE = 0.157031D+07

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X	BICF	BICR	OMEGAF	OMEGAR
Z	0.0	0.0	0.0	0.0
M	0.0	0.0	0.0	0.0
Y	0.0	0.0	0.0	0.0
L	0.0	0.0	0.0	0.0
N	0.0	0.0	0.0	0.0
CTF	0.0	0.0	0.0	0.0
CTR	0.0	0.0	0.0	0.0
CHF	0.0	0.0	0.0	0.0
CHR	0.0	0.0	0.0	0.0
AIF	0.0	0.0	0.0	0.0
AIR	0.0	0.0	0.0	0.0
VFR	0.0	0.0	0.0	0.0
VRR	0.0	0.0	0.0	0.0
QF	0.0	0.0	0.0	0.0
QR	0.0	0.0	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELR	QFALPHA
	-0.378D-03	-0.463D+00	0.816D+00	0.163D+01
	0.596D-03	0.111D+01	-0.520D-03	0.190D-02
	0.766D-02	-0.986D+00	-0.131D-05	0.244D-01
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELR	QRALPHA
	0.754D-04	-0.869D+01	-0.630D+00	0.124D+01
	-0.100D-02	0.142D+01	0.133D-02	-0.319D-02
	0.278D+00	0.659D+00	0.389D-02	0.886D+00

V	RC	GN	RH0	XF LW
FE	ALPHA	ALFF	THETA	LF LW
2.000000D+01	0.0	1.750000D+04	1.546598D-03	2.146112D+02
4.400000D+01	4.486761D+00	-4.697131D+01	4.536026D+00	1.023612D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	3.809958D+01	0.0	-1.582679D-02	4.300369D+03
7.050000D+02	0.0	-2.099430D-01	0.0	6.318543D+03
THEOF	AICF	BITF	BICF	DFW
THEOR	AICR	BITR	BICR	LEFW
1.730240D+01	-4.529957D-02	-2.500000D+00	-2.500000D+00	1.768759D+01
1.708578D+01	-5.643333D-01	-2.500000D+00	-2.500000D+00	-3.753229D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.719409D+01	1.695020D-01	1.684944D-01	-1.374576D-01	7.902394D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.021547D+04	6.843442D+02	-1.787078D+01	2.327238D+03	-2.443511D-01
7.626853D+03	4.982682D+02	-7.626030D+01	2.257418D+03	-3.459559D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.844546D+04	-3.727890D+02	7.860053D+00	3.428693D+01	9.272048D+02
1.650268D+04	4.699443D+01	1.030755D+01	-1.804122D+02	8.295466D+02
XR	L/DE	SHPTOT	MFF	NMLB
4.761265D+01	5.797628D-01	1.856751D+03	1.857751D+03	1.076570D-02
SIGOF	CISF	CPSF	AMTF	LAMDAF
SIGOR	CISR	CPSR	AMTR	LAMDAR
5.841923D-02	1.110254D-01	7.885108D-03	6.979594D-01	-5.450205D-02
5.841923D-02	8.325835D-02	7.054606D-03	6.994167D-01	-6.957553D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
4.772990D-02	3.545300D+01	7.012770D-01	1.331857D+00	4.022036D+00
4.786710D-02	2.268921D+01	5.318232D-04		3.036958D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
3.781375D+00	-3.967418D-04	2.376166D-01	7.794157D+00	6.954095D+00
3.667772D+00	-5.617219D-01	-6.719144D-01	6.691341D+00	5.682587D+00
CAPVF	ALPHAF	BETAFN	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
3.377986D+01	-5.033663D+00	3.600000D+02	-1.231864D+00	3.781375D+00
4.281118D+01	-3.797687D+01	3.600000D+02	1.154534D+00	3.710537D+00

CASE 6

PAGE 4

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMTR	CTFP	A90F
6.301922D-01	CTRP	A90RA
6.310799D-01	1.115819D-01	4.815442D+00
	6.887718D-02	3.881535D+00

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
0.0	9.272048D+02	1.856751D+03	1.076570D-02
0.0	8.295466D+02	1.857751D+03	1.883998D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

V	RC	GN	RHO	XF LM
FE	ALPHA	ALFF	THETA	LF LM
4.000000D+01	0.0	1.750000D+04	1.546598D-03	2.974025D+02
4.400000D+01	2.961130D+00	-1.584032D+01	3.032177D+00	1.007274D+04
VTF	CGF	BETAF	PSI	XR LM
VTR	CGL	PHI	GAMMA	LR LM
7.050000D+02	3.809958D+01	0.0	-1.190978D-02	3.214070D+03
7.050000D+02	0.0	-2.368263D-01	0.0	6.977463D+03
THEOF	AICF	B1TF	BICF	DFW
THEOR	AICR	B1TR	BICR	LFWM
1.615605D+01	7.189193D-01	-2.500000D+00	-2.500000D+00	1.382954D+02
1.739939D+01	4.611303D-01	-2.500000D+00	-2.500000D+00	-2.519098D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.677772D+01	-1.082421D+00	1.030691D-01	2.189393D-01	7.579629D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.004109D+04	8.515883D+02	1.321582D+02	2.969526D+03	6.414745D+02
7.654031D+03	6.565398D+02	7.740043D+01	2.962701D+03	3.791215D+02
QR	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.386194D+04	-2.444293D+02	1.939460D+01	6.523215D+01	6.968033D+02
1.702779D+04	1.511240D+02	-8.772140D+02	-1.698363D+02	8.559425D+02
XR	L/DE	SHPTOT	MFF	NMLB
1.815913D+02	1.318392D+00	1.652746D+03	1.653746D+03	2.418751D-02
SIGOF	CTSF	CP5F	AMTF	LAMDAF
SIGOR	CTSR	CP5R	AMTR	LAMDAR
5.841923D-02	1.090683D-01	5.925735D-03	7.306791D-01	-4.491495D-02
5.841923D-02	8.349607D-02	7.279082D-03	7.338411D-01	-7.666511D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
9.520302D-02	2.396338D+01	1.401270D+00	1.141296D+00	3.879491D+00
9.558840D-02	1.569777D+01	2.712666D-41		3.060119D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
4.827195D+00	1.041590D+00	-9.762450D-01	8.666413D+00	7.596655D+00
4.816074D+00	6.155743D-01	-1.828565D+00	7.831211D+00	6.793183D+00
CAPVF	ALPHA	BETAFW	AT1PF	BPTPF
CAPVR	ALPHAR	BETARW	AT1PR	BPTPR
6.753160D+01	-6.538870D+00	3.600000D+02	-1.711675D+00	4.938291D+00
7.753160D+01	-2.963515D+01	3.600000D+02	7.772038D-01	4.855255D+00

CASE 8

PAGE 4

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTF	CTFP	A90F	
RMTF	CTRP	A90RA	
5.983700D-01	1.098010D-01	3.513697D+00	
5.986588D-01	7.605994D-02	3.142768D+00	

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
2.563600D+00	6.993669D+02	1.657085D+03	2.412421D-02
1.775824D+00	8.577184D+02	1.658085D+03	4.221737D+02

PAGE 5

CASE 8

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
5.439174D+02	1.499900D+04	1.139350D+05	1.079530D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-2.196702D-02	5.066665D-02	3.400042D-02	1.428094D-01
-3.406493D-03	1.537907D+00	-9.757585D-03	-2.302325D-01
2.221316D-02	-1.001304D-01	-3.685055D-02	1.501306D+00
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
-1.261063D-01	-6.456551D+00	4.772251D-01	-5.095055D+00
-1.212649D-02	-2.613936D+00	2.209083D-03	8.195856D-01
-5.688152D-01	-3.321508D-01	2.256843D-02	-3.844415D+01
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-2.610519D-03	-5.320596D-01	2.723391D-01	1.335054D-03
-1.175707D-04	-8.129866D-01	-1.572210D-03	-7.946176D-03
-1.111139D-02	-2.466585D-01	1.616964D-03	-7.509785D-01
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
1.183960D-03	-1.633898D+00	3.832419D-02	1.794587D-02
-6.373567D-02	-2.510107D-01	8.978150D-01	-4.307662D+00
7.667074D-04	-1.965890D-01	1.781466D-01	5.181896D-02
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
4.431390D-04	-9.003141D-01	-2.920497D-02	-9.377901D-03
-1.081990D-02	3.245473D-02	3.521670D-01	-7.312774D-01
1.261973D-03	-2.018792D-02	-7.371933D-02	8.529219D-02
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
-2.400793D-04	-5.057053D-02	4.161563D-02	1.952331D-03
7.485822D-04	-1.393356D-01	8.405306D-03	5.059395D-02
-1.173156D-03	-6.539259D-02	1.180599D-01	-7.928936D-02

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	0.163D-04	0.115D-01	0.833D-04	0.563D-02	0.942D-03	0.450D-01
CTR	0.255D-04	0.180D-01	0.106D-03	0.717D-02	0.194D-02	0.345D-01
CHF	0.530D-05	0.374D-02	0.915D-05	0.618D-03	0.488D-03	0.548D-02
CHR	0.529D-05	0.373D-02	0.990D-05	0.669D-03	0.302D-04	0.408D-02
AIF	0.608D-03	0.429D+00	0.320D-03	0.216D-01	0.111D+00	0.277D+00
AIR	0.624D-03	0.440D+00	0.362D-03	0.244D-01	0.106D+00	0.256D+00
VFR	-0.217D+00	-0.153D+03	0.352D+00	0.238D+02	0.472D+01	0.149D+03
VRR	-0.439D-01	-0.309D+02	0.406D+00	0.275D+02	0.782D+01	0.839D+02
LF			0.108D+02	0.731D+03		
DF			0.208D+00	0.141D+02		
MF			0.117D+02	0.793D+03		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.440D-05	-0.297D-03	-0.386D-03	-0.973D-04	0.657D-02
CYR	0.284D-05	0.192D-03	0.181D-03	-0.292D-04	0.512D-02
BIF	0.482D-03	0.326D-01	-0.107D+00	-0.175D-01	0.103D+01
BIR	-0.676D-03	-0.457D-01	0.115D+00	-0.223D-02	0.104D+01
YF	-0.233D+02	-0.157D+04			
LF	-0.371D+02	-0.251D+04			
NF	0.104D+03	0.704D+04			
CTR					

-0.161D-03
-0.692D-04

FORCE = 0.157031D+07

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CASE 8

X	BICF	BICR	OMEGAF	OMEGAR
Z	0.0	0.0	0.0	0.0
M	0.0	0.0	0.0	0.0
Y	0.0	0.0	0.0	0.0
L	0.0	0.0	0.0	0.0
N	0.0	0.0	0.0	0.0
CTF	0.0	0.0	0.0	0.0
CTR	0.0	0.0	0.0	0.0
CHF	0.0	0.0	0.0	0.0
CHR	0.0	0.0	0.0	0.0
AIF	0.0	0.0	0.0	0.0
AIR	0.0	0.0	0.0	0.0
VFR	0.0	0.0	0.0	0.0
VRR	0.0	0.0	0.0	0.0
QF	0.0	0.0	0.0	0.0
QR	0.0	0.0	0.0	0.0
QFU	QFDELTAC	QFDELTAC	QFDELTAC	QFDELTAC
QFV	QFBETA	QFBETA	QFBETA	QFBETA
QFW	QFALPHA	QFALPHA	QFALPHA	QFALPHA
-0.670D-02	0.295D+00	0.607D+00	0.123D+01	
-0.404D-03	0.352D+01	-0.108D-01	-0.273D-01	
-0.928D-02	-0.554D+00	-0.166D-01	-0.627D+00	
QRU	QRP	QRDELB	QRDELTAC	
QRV	QRQ	QRDELS	QRBETA	
QRW	QRR	QRDELR	QRALPHA	
0.677D-02	0.547D+00	-0.746D+00	0.131D+01	
-0.451D-03	0.364D+01	0.589D-02	-0.305D-01	
0.432D-01	0.623D+00	-0.948D-02	0.292D+01	

PAGE 3

V	RC	GM	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
6.000000D+01	0.0	1.750000D+04	1.546598D-03	3.031408D+02
4.400000D+01	7.277265D+00	-8.900619D-01	7.351139D+00	1.046915D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	3.809958D+01	0.0	-2.903228D-02	2.220119D+03
7.050000D+02	0.0	-2.335070D-01	0.0	6.690840D+03
THEOF	AICF	B1TF	B1CF	DFW
THEOR	AICR	B1TR	B1CR	LFFW
1.603056D+01	2.393844D-01	2.800000D+00	2.800000D+00	3.458346D+02
1.679517D+01	9.913450D-02	4.000000D+00	4.000000D+00	-1.263524D+01
THEIAC	DELTAB	DELTAS	DELTAR	DELTAC
1.641287D+01	-1.505960D+00	4.977953D-02	5.907599D-02	7.296795D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.047303D+04	1.031262D+02	8.674411D+01	3.210959D+02	6.134953D+02
7.048515D+03	-1.212345D+02	4.373764D+01	-6.927967D+02	4.101541D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.274398D+04	3.127376D+01	2.904591D+01	8.602029D+01	6.406063D+02
1.482843D+04	3.446494D+02	-9.700564D+02	3.514875D+01	7.453861D+02
XR	L/DE	SHPTOT	WFF	NMLB
3.902650D+02	2.280157D+00	1.485992D+03	1.486992D+03	4.034991D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	1.138535D-01	5.447825D-03	7.582261D-01	-3.099304D-02
5.841923D-02	7.669684D-02	6.338891D-03	7.588332D-01	-6.107244D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
1.436314D-01	1.791936D+01	1.796438D+00	9.836996D-01	3.986613D+00
1.437379D-01	1.135388D+01	7.168741D-39		2.739692D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
5.213561D-01	9.961548D-01	3.366958D+00	4.404558D+00	8.866301D+00
-1.124935D+00	6.659636D-01	3.783532D+00	1.531496D+00	6.930382D+00
CAPVF	ALPHAF	BETAFF	ATIPF	BPTPF
CAPVR	ALPHAR	BETAR	ATIPR	BPTPR
1.013364D+02	-2.222735D+00	3.600000D+02	-1.701379D+00	1.124338D+00
1.061779D+02	-1.737121D+01	3.600000D+02	-8.476704D-01	1.307282D+00

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMIF	CTFP	A90F
RMTR	CTRP	A90RA
5.657634D-01	1.141221D-01	2.744710D+00
5.693615D-01	7.293551D-02	2.212409D+00

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	NFF	RP
7.853860D+00	6.484601D+02	1.498866D+03	4.000358D-02
5.019405D+00	7.504055D+02	1.499866D+03	7.000627D+02

STABILITY NOT CALCULATED FOR THIS CASE. SKIPPING TO NEXT CASE

V	RC	GM	RHO	XF	
FE	ALPHA	ALFF	THETA	LW	
8.000000D+01	0.0	1.750000D+04	1.546598D-03	LF	
4.400000D+01	5.370978D+00	9.528340D-01	5.447351D+00	LW	4.580096D+02
					1.031782D+04
VTF	CGF	BETAF	PSI	XR	
VTR	CGL	PHI	GAMMA	LW	
7.050000D+02	3.809958D+01	0.0	-2.317144D-02	LR	
7.050000D+02	0.0	-2.597354D-01	0.0	LW	1.438788D+03
					6.942630D+03
THEOF	AICF	B1IF	B1CF	DFW	
THEOR	AICR	B1IR	B1CR	LFFW	
1.607937D+01	-9.912609D-02	2.800000D+00	2.800000D+00		6.267207D+02
1.619752D+01	-2.811722D-01	4.000000D+00	4.000000D+00		9.947323D+01
THETAC	DELTAB	DELTAS	DELTAR	DELTAC	
1.613845D+01	-1.594802D+00	6.601907D-02	-1.119058D-01		7.084067D+00
TF	HF	YF	MHF	LHF	
TR	HR	YR	MHR	LHR	
1.032402D+04	2.860902D+02	2.924399D+01	9.597598D+02		4.997542D+02
7.090137D+03	-1.342761D+01	5.927729D-01	-1.951755D+02		2.393421D+02
QF	LFZ	YFY	LF	RHPF	
QR	DFX	MF	NF	RHPR	
1.252566D+04	1.577001D+02	5.403786D+01	8.743804D+01		6.296321D+02
1.305989D+04	6.146580D+02	-1.446572D+03	1.227133D+02		6.564862D+02
XR	L/DE	SHPTOT	WFF	NMLB	
6.729900D+02	3.521592D+00	1.386118D+03	1.387118D+03		5.767353D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF	
SIGOR	CTSR	CPSR	AMTR	LAMDAR	
5.841923D-02	1.121961D-01	5.354499D-03	7.901361D-01		-3.278676D-02
5.841923D-02	7.763237D-02	5.582871D-03	7.905236D-01		-5.206956D-02
MUF	VF	DFFR	DF	AOF	
MUR	VR	DFRF		AOR	
1.911553D-01	1.338583D+01	1.784140D+00	9.306534D-01		3.906206D+00
1.915753D-01	8.985564D+00	7.095555D-39			2.702328D+00
A1F	B1F	BETAOF	B180F	A270F	
A1R	B1R	BETAOR	B180R	A270R	
1.558511D+00	8.114555D-01	2.157769D+00	5.280250D+00		9.970920D+00
-3.168993D-01	3.886119D-01	2.876009D+00	8.241982D+00		7.625208D+00
CAPVF	ALPHAF	BETAFW	AT1PF	BPTPF	
CAPVR	ALPHAR	BETARW	AT1PR	BPTPR	
1.351152D+02	-4.129022D+00	3.600000D+02	-2.570511D+00		1.757104D+00
1.378765D+02	-1.159971D+01	3.600000D+02	-1.945900D+00		5.014423D-01

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XLF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTF	CTFP	A90F	
RMTR	CTRP	A90RA	
5.342498D-01	1.124726D-01	1.950704D+00	
5.366588D-01	7.568023D-02	1.469198D+00	

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	NFF	RP
1.652010D+01	6.461522D+02	1.413754D+03	5.654692D-02
1.111603D+01	6.676022D+02	1.414754D+03	9.895711D+02

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
5.439174D+02	1.499900D+04	1.139350D+05	1.079530D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-3.070230D-02	-1.677412D-01	-5.212119D-02	4.971709D-01
-4.964772D-04	2.002136D+00	-8.463754D-03	-6.680941D-02
5.389709D-02	-4.020447D-02	-4.144368D-02	7.252766D+00
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
-2.709279D-02	-7.559920D-01	6.409344D-01	-5.602108D+00
5.022744D-03	-3.885754D+00	2.849806D-03	6.758951D-01
-5.162227D-01	-4.089990D-01	5.000264D-02	-6.946649D+01
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-3.559253D-03	1.174804D-01	3.314653D-01	2.488705D-02
6.690870D-04	-9.990408D-01	-3.638090D-03	9.003697D-02
2.999844D-03	-2.560492D-01	1.218587D-03	4.036798D-01
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
1.299782D-03	-1.610950D+00	7.185630D-03	-1.936179D-02
-8.248930D-02	-1.961759D-01	8.811199D-01	-1.110033D+01
1.679644D-03	-2.664818D-01	2.462887D-01	2.260246D-01
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
-2.320950D-04	-8.557087D-01	-3.048518D-02	-2.289252D-02
-7.339317D-03	4.470300D-02	3.432792D-01	-9.876294D-01
-5.011030D-04	-6.669484D-02	-5.302080D-02	-6.743188D-02
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
9.249256D-05	-4.766306D-02	3.825920D-02	1.040596D-02
-1.030109D-03	-1.235623D-01	1.183452D-02	-1.386186D-01
-3.375339D-04	-6.585546D-02	1.154151D-01	-4.542090D-02

LONGITUDINAL

	U	MU	M	ALPHA	Q	THETAC
CTF	-0.571D-05	-0.403D-02	0.102D-03	0.138D-01	-0.106D-02	0.528D-01
CTR	0.119D-04	0.840D-02	0.643D-04	0.865D-02	0.251D-02	0.348D-01
CHF	0.291D-05	0.205D-02	0.518D-05	0.697D-03	-0.407D-03	0.366D-02
CHR	0.249D-05	0.176D-02	0.134D-05	0.180D-03	-0.162D-03	0.169D-02
ALF	0.484D-03	0.341D+00	0.689D-03	0.927D-01	-0.115D+00	0.574D+00
ALR	0.537D-03	0.379D+00	0.439D-03	0.590D-01	-0.955D-01	0.470D+00
VFR	-0.108D+00	-0.764D+02	0.204D+00	0.274D+02	-0.231D+01	0.106D+03
VRR	-0.354D-01	-0.250D+02	0.129D+00	0.173D+02	0.529D+01	0.649D+02
LF			0.205D+02	0.276D+04		
DF			-0.607D+00	-0.817D+02		
MF			0.629D+02	0.847D+04		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.337D-05	-0.454D-03	-0.379D-03	-0.110D-03	0.672D-02
CYR	0.239D-05	0.321D-03	0.179D-03	-0.174D-04	0.472D-02
B1F	-0.262D-03	-0.353D-01	-0.997D-01	-0.222D-01	0.102D+01
B1R	0.530D-03	0.713D-01	0.106D+00	0.576D-02	0.103D+01
YF	-0.358D+02	-0.482D+04			
LF	-0.132D+02	-0.178D+04			
NF	-0.102D+03	-0.137D+05			
CTF					-0.324D-03
CTR					-0.135D-03

FORCE = 0.157031D+07

X	BICF	BICR	OMEGAF	OMEGAR	
Z	0.0	0.0	0.0	0.0	
M	0.0	0.0	0.0	0.0	
Y	0.0	0.0	0.0	0.0	
L	0.0	0.0	0.0	0.0	
H	0.0	0.0	0.0	0.0	
CTF	0.0	0.0	0.0	0.0	
CTR	0.0	0.0	0.0	0.0	
CHR	0.0	0.0	0.0	0.0	
AIF	0.0	0.0	0.0	0.0	
AIR	0.0	0.0	0.0	0.0	
VFR	0.0	0.0	0.0	0.0	
VRR	0.0	0.0	0.0	0.0	
QF	0.0	0.0	0.0	0.0	
QR	0.0	0.0	0.0	0.0	
	QFU	QFP	QFDELB	QFDELTAC	
	QFV	QFQ	QFDELS	QFBETA	
	QFW	QFR	QFDELR	QFALPHA	
	-0.888D-03	-0.141D+00	0.665D+00	0.138D+01	
	-0.736D-05	0.117D+01	-0.410D-02	-0.990D-03	
	-0.575D-02	-0.659D+00	-0.672D-02	-0.773D+00	
	QRU	QRP	QRDELB	QRDELTAC	
	QRV	QRQ	QRDELS	QRBETA	
	QRW	QRR	QRDELR	QRALPHA	
	-0.201D-02	0.900D-01	-0.579D+00	-0.104D+01	
	-0.507D-03	0.115D+01	0.126D-01	-0.682D-01	
	0.909D-02	0.535D+00	-0.204D-01	0.122D+01	

CASE 8

PAGE 3

V	RC	GW	RHO	XF LM
FE	ALPHA	ALFF	THETA	LF LM
1.000000D+02	0.0	1.750000D+04	1.546598D-03	6.469737D+02
4.400000D+01	3.164320D+00	3.612771D-01	3.217962D+00	1.020769D+04
VTF	CGF	BETAF	PSI	XR LM
VTR	CGL	PHI	GAMMA	LR LM
7.050000D+02	3.809958D+01	0.0	-1.551747D-02	1.135264D+03
7.050000D+02	0.0	-2.841096D-01	0.0	7.069123D+03
THEOF	AICF	BITF	BICF	DFW
THEOR	AICR	BITR	BICR	LFFW
1.667595D+01	-5.120792D-01	2.800000D+00	2.800000D+00	9.759280D+02
1.631390D+01	-7.374642D-01	4.000000D+00	4.000000D+00	1.433412D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.649493D+01	-1.672886D+00	7.224344D-02	-2.594285D-01	7.360410D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.021675D+04	4.834300D+02	-4.470235D+01	1.720446D+03	4.129779D+02
7.158737D+03	1.175046D+02	-5.306804D+01	3.901496D+02	8.285394D+01
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.443392D+04	1.969936D+02	7.919091D+01	1.922281D+02	7.255553D+02
1.291022D+04	9.665277D+02	-2.437179D+03	1.500799D+02	6.489631D+02
XR	L/DE	SHPTOT	WFF	NMLB
1.008618D+03	4.613613D+00	1.474518D+03	1.475518D+03	6.777279D-02
SIGOF	CISF	CPSF	AMTF	LAMDAF
SIGOR	CISR	CPSR	AMTR	LAMDAR
5.841923D-02	1.119720D-01	6.170247D-03	8.222070D-01	-4.153237D-02
5.841923D-02	7.856939D-02	5.518893D-03	8.222505D-01	-5.285362D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
2.381028D-01	1.064222D+01	1.748640D+00	9.179154D-01	3.909878D+00
2.390293D-01	7.354113D+00	7.019507D-39		2.728932D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
2.794518D+00	6.705489D-01	7.951939D-01	6.415312D+00	1.148903D+01
6.334812D-01	1.345263D-01	1.839081D+00	3.135991D+00	8.667293D+00
CAPVF	ALPHAF	BETAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
1.688940D+02	-6.333568D+00	3.600000D+02	-3.541162D+00	2.873842D+00
1.711491D+02	-1.006388D+01	3.600000D+02	-3.202199D+00	6.476077D-01

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CASE 8

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMTF	CTFP	A90F
RMTR	CTRP	A90RA
5.031462D-01	1.112720D-01	1.311974D+00
5.046730D-01	7.705910D-02	9.312142D-01

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
3.132593D+01	7.568813D+02	1.527538D+03	6.542197D-02
2.169411D+01	6.706572D+02	1.528538D+03	1.144885D+03

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

V	RC	GN	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
1.120000D+02	0.0	1.750000D+04	1.546598D-03	7.844002D+02
4.400000D+01	1.708885D+00	-5.378734D-01	1.753673D+00	1.018039D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	3.809958D+01	0.0	-9.313385D-03	1.064355D+03
7.050000D+02	0.0	-3.165543D-01	0.0	7.143431D+03
THEOF	AICF	B1TF	BICF	DFW
THEOR	AICR	B1TR	BICR	LFFW
1.722747D+01	-8.157883D-01	2.800000D+00	2.800000D+00	1.222192D+03
1.661487D+01	-1.093685D+00	4.000000D+00	4.000000D+00	1.128738D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.692117D+01	-1.680283D+00	9.022692D-02	-3.900856D-01	7.690829D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.019275D+04	6.029137D+02	-9.930172D+01	2.230118D+03	3.252244D+02
7.219478D+03	2.014689D+02	-9.586172D+01	7.855111D+02	-6.060532D+01
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.654738D+04	1.492709D+02	1.013787D+02	2.685406D+02	8.317932D+02
1.341044D+04	1.218283D+03	-3.331443D+03	1.417921D+02	6.741075D+02
XR	L/DE	SHPTOT	WFF	NMLB
1.249542D+03	5.117364D+00	1.605901D+03	1.606901D+03	6.969939D-02
SIGOF	CISF	CPSF	AMTF	LAMDAF
SIGOR	CISR	CPSR	AMTR	LAMDAR
5.841923D-02	1.119974D-01	7.073712D-03	8.415346D-01	-4.983178D-02
5.841923D-02	7.907406D-02	5.732726D-03	8.412597D-01	-5.688874D-02
MUF	VF	DFFR	DF	A0F
MUR	VR	DFRF		A0R
2.658370D-01	9.488266D+00	1.688000D+00	9.192601D-01	3.917599D+00
2.671706D-01	6.646603D+00	6.135020D-41		2.730740D+00
A1F	B1F	BETA0F	B180F	A270F
A1R	B1R	BETA0R	B180R	A270R
3.623356D+00	5.280597D-01	-9.407764D-02	7.182749D+00	1.253230D+01
1.275504D+00	-9.840216D-02	1.150972D+00	3.728509D+00	9.398207D+00
CAPVF	ALPHAF	BETAFW	AT1PF	BPTPF
CAPVR	ALPHAR	BETARW	AT1PR	BPTPR
1.891613D+02	-7.79115D+00	3.600000D+02	-4.167759D+00	3.661633D+00
1.913041D+02	-1.007309D+01	3.600000D+02	-4.015611D+00	1.279294D+00

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CASE 10

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTR	CTFP	A90F	
4.848678D-01	CTRP	A90RA	
4.858980D-01	1.109744D-01	9.566799D-01	
	7.786912D-02	6.281244D-01	
NON UNIFORM DOWNWASH POWER CORRECTIONS			
DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
4.274106D+01	8.745343D+02	1.678633D+03	6.668125D-02
2.999078D+01	7.040983D+02	1.679633D+03	1.166922D+03

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CASE 10

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
5.439174D+02	1.499900D+04	1.139350D+05	1.079530D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-4.029974D-02	-1.407962D-01	2.189382D-02	3.254427D-01
-4.057124D-04	1.244239D+00	-2.057784D-03	-7.672700D-02
5.125690D-02	-7.379944D-02	-3.601684D-02	9.693539D+00
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
3.158778D-03	-1.231000D+00	5.362725D-01	-6.589830D+00
6.060697D-03	-4.512371D+00	4.225776D-03	1.146179D+00
-6.166897D-01	-3.089243D-01	7.386916D-02	-1.166264D+02
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-1.871836D-03	1.007799D-01	3.470622D-01	7.529435D-03
1.174523D-03	-9.940037D-01	-5.207907D-03	2.221220D-01
-8.184419D-04	-2.745664D-01	1.605679D-03	-1.547811D-01
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
1.919742D-03	-1.234536D+00	-5.927022D-02	2.061083D-03
-1.118743D-01	1.075418D-01	8.865590D-01	-2.115730D+01
-3.439970D-03	-1.237440D-01	2.386095D-01	-6.505559D-01
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
1.245541D-04	-7.570279D-01	-5.749429D-02	-2.360308D-02
-9.216053D-03	1.791210D-01	3.451794D-01	-1.742910D+00
-2.487724D-03	-7.705182D-03	-5.608296D-02	-4.704703D-01
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
8.931787D-05	-4.187469D-02	5.074017D-02	1.284119D-02
-1.140565D-03	-1.880210D-01	1.147457D-02	-2.157000D-01
7.256431D-04	-7.151253D-02	1.167606D-01	1.372313D-01

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	-0.774D-05	-0.546D-02	0.109D-03	0.207D-01	-0.101D-02	0.585D-01
CTR	0.369D-05	0.260D-02	0.862D-04	0.163D-01	0.264D-02	0.440D-01
CHF	0.262D-05	0.185D-02	0.652D-05	0.123D-02	-0.203D-03	0.647D-02
CHR	0.239D-05	0.168D-02	0.486D-05	0.919D-03	-0.761D-04	0.361D-02
AIF	0.507D-03	0.358D+00	0.971D-03	0.184D+00	-0.116D+00	0.847D+00
AIR	0.495D-03	0.349D+00	0.775D-03	0.146D+00	-0.883D-01	0.726D+00
VFR	-0.605D-01	-0.426D+02	0.159D+00	0.301D+02	-0.158D+01	0.847D+02
VGR	-0.288D-01	-0.203D+02	0.125D+00	0.237D+02	0.397D+01	0.620D+02
LF			0.294D+02	0.556D+04		
DF			-0.759D+00	-0.144D+03		
MF			0.798D+02	0.151D+05		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.384D-05	-0.726D-03	-0.261D-03	-0.795D-04	0.673D-02
CYR	0.251D-05	0.475D-03	0.167D-03	-0.366D-04	0.479D-02
BIF	-0.264D-03	0.500D-01	-0.985D-01	-0.187D-01	0.103D+01
BIR	0.370D-03	0.700D-01	0.104D+00	0.256D-02	0.103D+01
YF	-0.509D+02	-0.962D+04			
LF	-0.308D+02	-0.583D+04			
NF	-0.106D+03	-0.201D+05			
CTF					-0.396D-03
CTR					-0.250D-03

FORCE = 0.157031D+07

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X	BICF	BICR	OMEGAF	OMEGAR
Z	0.0	0.0	0.0	0.0
M	0.0	0.0	0.0	0.0
Y	0.0	0.0	0.0	0.0
L	0.0	0.0	0.0	0.0
N	0.0	0.0	0.0	0.0
CTF	0.0	0.0	0.0	0.0
CTR	0.0	0.0	0.0	0.0
CHF	0.0	0.0	0.0	0.0
CHR	0.0	0.0	0.0	0.0
AIF	0.0	0.0	0.0	0.0
AIR	0.0	0.0	0.0	0.0
VRR	0.0	0.0	0.0	0.0
QF	0.0	0.0	0.0	0.0
QR	0.0	0.0	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELR	QFALPHA
	-0.217D-02	-0.231D+00	0.103D+01	0.177D+01
	0.665D-03	-0.253D+00	0.213D-02	0.126D+00
	0.508D-01	-0.818D+00	0.313D-02	0.961D+01
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELR	QRALPHA
	-0.301D-02	0.513D+00	-0.600D+00	0.112D+01
	-0.253D-04	0.205D+01	0.167D-01	-0.478D-02
	0.980D-02	0.607D+00	-0.269D-01	0.185D+01

CATALOG OF TRIM & STABILITY DERIVATIVE DATA

A-97 TRIM ANALYSIS (CH-46E)

GW = 17,500 lb CG = 40 in. fwd

<u>ALTITUDE</u>	<u>AIRSPEED</u>	<u>CLIMB RATE</u>	<u>SIDESLIP</u>	<u>DERIVATIVES</u>
0 ft	60 kt	-2067 ft/min	0 deg	
	80	-2282		X
	100	-2875		
	120	-3987		
	60	2774		
	80	2547		X
	100	2186		
	120	1517		

V	RC	GN	RHO	XF LW
FE	ALPHA	ALFF	THEIA	LF LW
6.350000D+01	-2.067000D+03	1.750000D+04	2.378000D-03	-2.573852D+03
4.400000D+01	2.133645D+01	1.735069D+01	2.667233D+00	9.025584D+03
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	3.809958D+01	0.0	-5.975977D-02	-1.507999D+03
7.050000D+02	0.0	-1.551783D-01	-1.873666D+01	6.962667D+03
THEOF	AICF	BITF	BICF	DFW
THEOR	AICR	BITR	BICR	LFFW
8.757357D+00	6.356432D-01	-2.500000D+00	-2.500000D+00	7.911975D+02
8.401628D+00	8.131748D-01	-2.500000D+00	-2.500000D+00	7.918676D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
8.579493D+00	-1.083154D+00	-5.273281D-02	2.925198D-01	1.224413D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
9.361619D+03	6.678076D+02	9.419484D+01	2.325205D+03	7.270247D+02
7.108415D+03	4.724635D+02	8.689211D+01	2.127649D+03	7.128399D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
-2.577794D+03	1.025465D+03	3.993409D+01	-9.489462D+01	-1.295789D+02
2.781381D+02	4.488526D+02	1.678749D+03	-1.860247D+02	1.398127D+01
XR	L/DE	SHPTOT	WFF	NMLB
-4.791756D+03	3.714106D+00	-1.559767D+01	-1.459767D+01	-4.119481D+00
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	6.669776D-02	-7.166909D-04	7.247726D-01	1.670067D-02
5.841923D-02	5.019790D-02	7.732932D-05	7.241018D-01	1.065110D-02
MUF	VF	DFFR	DF	A0F
MUR	VR	DFRF		A0R
1.488898D-01	1.022427D+01	1.093389D+00	8.633536D-01	3.095310D+00
1.473870D-01	7.868003D+00	7.022702D-38		2.186048D+00
A1F	B1F	BETA0F	B180F	A270F
A1R	B1R	BETA0R	B180R	A270R
3.778067D+00	1.180521D+00	-7.364855D-01	6.807973D+00	3.279204D+00
3.456665D+00	1.157485D+00	-1.306783D+00	5.595228D+00	2.136201D+00
CAPVF	ALPHAF	BETAFW	AT1PF	BPTPF
CAPVR	ALPHAR	BETARW	AT1PR	BPTPR
1.072477D+02	1.183645D+01	3.600000D+02	1.561452D+01	3.958209D+00
1.050395D+02	8.417977D+00	3.600000D+02	1.779312D+01	3.645312D+00

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMTF	CTFP	A90F
RMTR	CTRP	A90RA
5.374486D-01	6.398810D-02	3.899533D-01
5.384332D-01	4.936277D-02	4.219845D-03

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELMPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
8.114936D+00	-1.214640D+02	-1.222571D+00	-2.853027D+02
6.260160D+00	2.024143D+01	-2.225706D-01	-4.992797D+06

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

V	RC	GM	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
8.320000D+01	-2.282000D+03	1.750000D+04	2.378000D-03	-1.829686D+03
4.400000D+01	1.824800D+01	1.601495D+01	2.592523D+00	8.957928D+03
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	3.809958D+01	0.0	-8.851807D-02	-1.158584D+03
7.050000D+02	0.0	-2.710778D-01	-1.570365D+01	6.651909D+03
THEOF	AICF	B1TF	BICF	DFW
THEOR	AICR	B1TR	BICR	LFFW
8.699677D+00	5.381390D-01	-8.000000D-01	-8.000000D-01	1.291287D+03
7.953126D+00	7.073441D-01	-8.000000D-01	-8.000000D-01	1.335155D+03
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
8.326402D+00	-1.356377D+00	-5.157820D-02	2.481600D-01	1.028218D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
9.131994D+03	4.459989D+02	8.389074D+01	1.475329D+03	7.884850D+02
6.746369D+03	2.769702D+02	7.359507D+01	1.128845D+03	7.259693D+02
QF	LFZ	YFZ	LF	RHPF
QR	DFX	MF	NF	RHPR
-2.566236D+03	1.672352D+03	7.209532D+01	-1.722437D+02	-1.289980D+02
-1.131904D+02	8.082698D+02	2.565442D+03	-1.992746D+02	-5.689783D+00
XR	L/DE	SHPTOT	WFF	NMLB
-3.417256D+03	5.332948D+00	-3.468774D+01	-3.368774D+01	-2.377557D+00
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	6.524549D-02	-7.134775D-04	7.546564D-01	1.960553D-02
5.841923D-02	4.772669D-02	-3.146974D-05	7.538807D-01	1.786437D-02
MUF	VF	DFFR	DF	A0F
MUR	VR	DFRF		A0R
1.970002D-01	7.549568D+00	1.217690D+00	8.649536D-01	2.982804D+00
1.954904D-01	5.621819D+00	2.756873D-37		1.985913D+00
A1F	B1F	BETA0F	B180F	A270F
A1R	B1R	BETA0R	B180R	A270R
2.396124D+00	1.280334D+00	4.613178D-01	5.262895D+00	3.782377D+00
1.833167D+00	1.178807D+00	7.867689D-02	3.743001D+00	2.201885D+00
CAPVF	ALPHA	BETAFW	AT1PF	BPTPF
CAPVR	ALPHAR	BETARW	AT1PR	BPTPR
1.405198D+02	8.748002D+00	4.085339D-17	1.114413D+01	2.716738D+00
1.390194D+02	7.529329D+00	4.116890D-17	1.308117D+01	2.179469D+00

CASE 11

PAGE 4

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMTF	CTFP	A90F
RMTR	CTRP	A90RA
5.060627D-01	6.350844D-02	3.193947D-02
5.073284D-01	4.715961D-02	3.596442D+02

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SNPTOT	NMLB
DELHPR	RHPR	WFF	RP
1.556236D+01	-1.134356D+02	-7.569212D+00	-1.266514D+01
1.155617D+01	5.866390D+00	-6.569212D+00	-2.216400D+05

CASE 11

PAGE 5

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
5.439174D+02	1.499900D+04	1.139350D+05	1.079530D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-3.109849D-02	-3.897353D-01	7.771003D-03	6.308448D-01
1.229717D-03	2.882377D+00	-2.162742D-03	1.641405D-01
7.335296D-02	-9.263850D-02	-4.441957D-02	9.791029D+00
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
-1.200186D-02	2.287112D+00	6.854787D-01	-8.999640D+00
-9.986261D-03	-4.274125D+00	-1.409239D-02	-1.332949D+00
-8.468111D-01	1.998540D-01	4.633355D-02	-1.130309D+02
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-4.683886D-03	4.160169D-01	4.733655D-01	-4.202598D-03
-1.691836D-03	-1.396273D+00	-5.074527D-03	-2.258234D-01
1.711362D-03	-9.259558D-02	1.250290D-03	2.284298D-01
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
1.311098D-03	-2.582759D+00	8.362605D-02	2.516285D-02
-1.408001D-01	-4.267066D-01	7.899454D-01	-1.879377D+01
1.789337D-03	-3.439366D-01	1.957529D-01	2.388377D-01
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
-9.757894D-04	-9.536564D-01	5.869505D-02	1.184569D-02
9.456407D-04	-2.083790D-01	3.208764D-01	1.262225D-01
2.935175D-03	-1.088965D-01	-5.360027D-02	3.917822D-01
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
5.394049D-04	-2.406819D-02	-2.320674D-02	2.036524D-03
-6.892636D-04	4.189680D-02	9.911572D-03	-9.200174D-02
-1.179632D-03	-1.577803D-02	1.036216D-01	-1.574553D-01

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	-0.909D-05	-0.641D-02	0.103D-03	0.137D-01	-0.117D-02	0.522D-01
CTR	0.580D-05	0.409D-02	0.726D-04	0.969D-02	0.224D-02	0.392D-01
CHF	0.202D-06	0.143D-03	0.653D-05	0.872D-03	-0.412D-03	0.439D-02
CHR	0.779D-06	0.549D-03	0.362D-05	0.483D-03	-0.165D-03	0.270D-02
AIF	0.143D-03	0.101D+00	0.657D-03	0.877D-01	-0.785D-01	0.587D+00
AIR	0.149D-03	0.105D+00	0.429D-03	0.573D-01	-0.574D-01	0.502D+00
VFR	-0.706D-01	-0.498D+02	0.192D+00	0.256D+02	-0.222D+01	0.105D+03
VRR	-0.283D-01	-0.199D+02	0.139D+00	0.185D+02	0.444D+01	0.796D+02
LF			0.388D+02	0.517D+04		
DF			-0.189D+01	-0.252D+03		
MF			0.110D+03	0.147D+05		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.951D-06	-0.127D-03	-0.329D-03	-0.590D-04	0.386D-02
CYR	0.599D-06	0.800D-04	0.253D-03	0.185D-04	0.283D-02
BIF	0.999D-04	0.133D-01	-0.660D-01	-0.111D-01	0.102D+01
BIR	-0.870D-04	-0.116D-01	0.648D-01	0.415D-02	0.102D+01
YF	-0.728D+02	-0.972D+04			
LF	0.547D+02	0.730D+04			
NF	-0.863D+02	-0.115D+05			
CTF					-0.190D-03
CTR					-0.904D-04

FORCE = 0.241446D+07

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X	BICF	BICR	OMEGAF	OMEGAR
Z	0.0	0.0	0.0	0.0
M	0.0	0.0	0.0	0.0
Y	0.0	0.0	0.0	0.0
L	0.0	0.0	0.0	0.0
N	0.0	0.0	0.0	0.0
CTF	0.0	0.0	0.0	0.0
CTR	0.0	0.0	0.0	0.0
CHF	0.0	0.0	0.0	0.0
CHR	0.0	0.0	0.0	0.0
AIF	0.0	0.0	0.0	0.0
AIR	0.0	0.0	0.0	0.0
VFR	0.0	0.0	0.0	0.0
VRR	0.0	0.0	0.0	0.0
QF	0.0	0.0	0.0	0.0
QR	0.0	0.0	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELR	QFALPHA
	0.969D-02	-0.584D-01	-0.275D+00	-0.543D+00
	0.124D-02	0.406D+01	-0.740D-02	0.165D+00
	-0.136D+00	-0.667D-01	-0.106D-01	-0.181D+02
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELR	QRALPHA
	-0.594D-02	0.500D+00	0.436D+00	-0.226D+00
	-0.472D-02	-0.623D+00	-0.126D-03	-0.631D+00
	-0.789D-01	0.532D-01	-0.965D-02	-0.105D+02

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V	RC	GW	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
1.041000D+02	-2.875000D+03	1.750000D+04	2.378000D-03	-1.436409D+03
4.400000D+01	1.840433D+01	1.705550D+01	2.658130D+00	8.555985D+03
VIF	CGF	BEIAF	PSI	XR LW
VIR	CGL	PHI	GAMMA	LR LW
7.050000D+02	3.809958D+01	0.0	-1.434751D-01	-9.839404D+02
7.050000D+02	0.0	-4.355062D-01	-1.581515D+01	6.071650D+03
THEOF	AICF	BITF	BICF	DFW
THEOR	AICR	BITR	BICR	LFFW
8.365613D+00	4.983088D-01	1.600000D+00	1.600000D+00	2.075510D+03
7.235471D+00	6.633799D-01	1.600000D+00	1.600000D+00	2.265210D+03
THEIAC	DELTAB	DELTAS	DELTAR	DELTAC
7.800542D+00	-1.447463D+00	-5.734204D-02	2.437088D-01	6.205753D-01
TF	NF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
8.675204D+03	9.475954D+01	8.949809D+01	9.076034D+01	8.930177D+02
6.150860D+03	9.998173D-01	6.879203D+01	-4.191562D+02	7.941693D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
-2.634872D+03	2.804630D+03	1.116462D+02	-2.656211D+02	-1.324481D+02
-4.557975D+02	1.254179D+03	4.536126D+03	-4.730771D+02	-2.291174D+01
XR	L/DE	SHPTOT	WFF	NMLB
-2.653607D+03	7.055232D+00	-5.535987D+01	-5.435987D+01	-1.842525D+00
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	6.173437D-02	-7.325601D-04	7.860099D-01	3.047942D-02
5.841923D-02	4.399486D-02	-1.267230D-04	7.853024D-01	3.378584D-02
MUF	VF	DFFR	DFF	AOF
MUR	VR	DFRF		AOR
2.463826D-01	5.726080D+00	1.198706D+00	8.827549D-01	2.733807D+00
2.444643D-01	4.081950D+00	3.062386D-36		1.703133D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
1.473636D-01	1.450107D+00	2.387332D+00	2.696023D+00	3.967712D+00
-6.805809D-01	1.289566D+00	2.267605D+00	9.133757D-01	1.974276D+00
CAPVF	ALPHAF	BETAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
1.758187D+02	8.904326D+00	3.600000D+02	9.051690D+00	1.457576D+00
1.745911D+02	9.195722D+00	3.600000D+02	1.072375D+01	1.458139D+00

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CASE 10

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTF	CTFP	A90F	
RMTB	CTRP	A90RA	
4.739056D-01	6.065881D-02	3.596033D+02	
4.757588D-01	4.304578D-02	3.592453D+02	

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
2.905554D+01	-1.033926D+02	-5.685423D+00	-2.221765D+01
2.061891D+01	-2.292837D+00	-4.685423D+00	-3.888123D+05

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

V	RC	GM	RHO	XF LM
FE	ALPHA	ALFF	THETA	LF LM
1.265000D+02	-3.987000D+03	1.750000D+04	2.378000D-03	-1.266565D+03
4.400000D+01	1.956204D+01	1.874488D+01	1.446906D+00	7.633712D+03
VTF	CGF	BETAF	PSI	XR LM
VTR	CGL	PHI	GAMMA	LR LM
7.050000D+02	3.809958D+01	0.0	-2.274062D-01	-8.300666D+02
7.050000D+02	0.0	-6.364489D-01	-1.812079D+01	5.332135D+03
THEOF	AICF	BITF	BICF	DFW
THEOR	AICR	BITR	BICR	LFFW
7.301885D+00	8.123131D-01	2.800000D+00	2.800000D+00	3.227737D+03
6.370469D+00	7.812306D-01	4.000000D+00	4.000000D+00	3.685545D+03
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
6.836177D+00	-1.947249D+00	3.465254D-04	3.522957D-01	-1.269947D-01
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
7.737587D+03	-8.663562D+01	1.377272D+02	-8.009910D+02	1.170614D+03
5.391299D+03	-2.336012D+02	1.065442D+02	-2.099522D+03	9.771820D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
-3.230736D+03	4.553548D+03	1.603800D+02	-3.789279D+02	-1.624007D+02
-2.169220D+02	1.807408D+03	7.785538D+03	-1.068971D+03	-1.090410D+01
XR	L/DE	SHPTOT	WFF	NMLB
-2.211146D+03	8.652922D+00	-7.350476D+01	-7.230476D+01	-1.662767D+00
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	5.509054D-02	-8.982252D-04	8.199630D-01	4.700705D-02
5.841923D-02	3.831639D-02	-6.030971D-05	8.201975D-01	5.510769D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
2.983898D-01	4.187936D+00	1.119274D+00	9.041098D-01	2.218986D+00
2.957962D-01	2.929993D+00	1.474993D-34		1.226621D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
-1.300645D+00	1.901021D+00	3.342349D+00	7.354799D-01	3.591265D+00
-3.410914D+00	1.586809D+00	4.609862D+00	-2.276819D+00	1.498275D+00
CAPVF	ALPHA	BETAFW	ATPF	BPTPF
CAPVR	ALPHAR	BETARW	ATPR	BPTPR
2.136509D+02	1.006204D+01	3.600000D+02	8.761399D+00	2.303380D+00
2.126806D+02	1.132939D+01	3.600000D+02	9.151130D+00	3.761954D+00

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMIF	CTFP	A90F	
RMTR	CTRP	A90RA	
4.409834D-01	5.412023D-02	3.590825D+02	
4.433153D-01	3.780289D-02	3.588005D+02	

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
4.335181D+01	-1.190489D+02	3.282100D-01	9.524096D+01
3.028116D+01	1.937706D+01	1.328210D+00	1.666717D+06

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

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V	RC	GW	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
6.610000D+01	2.774000D+03	1.750000D+04	2.378000D-03	5.014151D+03
4.400000D+01	-2.351878D+01	-2.859338D+01	9.555640D-01	9.834577D+03
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	3.809958D+01	0.0	2.094525D-01	3.920932D+03
7.050000D+02	0.0	-4.913330D-01	2.446471D+01	7.479833D+03
THEOF	AICF	BITF	BICF	DFW
THEOR	AICR	BITR	BICR	LFWM
1.896383D+01	-8.704821D-01	-2.500000D+00	-2.500000D+00	1.290216D+03
1.793609D+01	-1.477590D+00	-2.500000D+00	-2.500000D+00	-1.581597D+03
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.844996D+01	-5.573242D-01	1.998959D-01	-4.837508D-01	8.875936D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.097815D+04	1.157994D+03	-1.113052D+02	3.607166D+03	-1.026292D+02
8.401954D+03	8.536861D+02	-1.857842D+02	3.322376D+03	-6.324347D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	NF	NF	RHPR
2.966461D+04	-1.965073D+03	7.971347D+01	3.074906D+02	1.491162D+03
2.317441D+04	5.519012D+02	-3.423192D+03	-1.257795D+03	1.164917D+03
XR	L/DE	SHPTOT	WFF	NMLB
8.542442D+03	3.475222D+00	2.756079D+03	2.757079D+03	2.182212D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	7.820213D-02	8.247501D-03	7.233042D-01	-1.015921D-01
5.841923D-02	5.940981D-02	6.443063D-03	7.248713D-01	-1.016262D-01
MUF	VF	DFFR	DF	A0F
MUR	VR	DFR	A0R	A0R
1.327778D-01	1.074535D+01	6.401733D-01	1.195219D+00	4.601992D+00
1.364153D-01	8.073664D+00	4.977855D-03		3.513752D+00
AIF	BIF	BETA0F	B180F	A270F
AIR	BIR	BETA0R	B180R	A270R
5.867040D+00	-1.666347D-01	-1.410232D+00	1.035406D+01	7.954431D+00
5.402393D+00	-1.026911D+00	-1.956719D+00	8.824316D+00	6.439731D+00
CAPVF	ALPHA	BETAFW	ATIPF	BTIPF
CAPVR	ALPHAR	BETARW	ATIPR	BTIPR
1.116609D+02	-3.303612D+01	3.600000D+02	3.328483D+02	5.869406D+00
1.152846D+02	-3.346521D+01	3.600000D+02	3.348836D+02	5.499127D+00

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMIF	CIFP	A90F	
RMTR	CTRP	A90RA	
5.449466D-01	6.972356D-02	2.866544D+00	
5.439912D-01	5.302929D-02	2.295547D+00	

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
9.930217D+00	1.501093D+03	2.773562D+03	2.382358D-02
7.552573D+00	1.172469D+03	2.774562D+03	4.169127D+02

STABILITY NOT CALCULATED FOR THIS CASE. SKIPPING TO NEXT CASE

V	RC	GN	RHO	XF LM
FE	ALPHA	ALFF	THETA	LF LM
8.400000D+01	2.547000D+03	1.750000D+04	2.378000D-03	4.051106D+03
4.400000D+01	-1.701836D+01	-2.025123D+01	4.090563D-01	1.051987D+04
VTF	CGF	BETAF	PSI	XR LM
VTR	GGL	PHI	GAMMA	LR LM
7.050000D+02	3.809958D+01	0.0	1.764374D-01	3.064393D+03
7.050000D+02	0.0	-5.923880D-01	1.741049D+01	7.776736D+03
THEOF	AICF	BITF	BICF	DFW
THEOR	AICR	BITR	BICR	LEFW
1.916420D+01	-1.128636D+00	-8.000000D-01	-8.000000D-01	1.515284D+03
1.797376D+01	-1.684203D+00	-8.000000D-01	-8.000000D-01	-1.732736D+03
THEIAC	DELTAB	DELTAS	DELTAR	DELTAC
1.856898D+01	-1.009050D+00	1.917065D-01	-5.785217D-01	8.968202D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.122175D+04	1.073075D+03	-1.393759D+02	3.245817D+03	-6.147682D+01
8.325689D+03	7.423124D+02	-1.993780D+02	2.833839D+03	-6.022140D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
3.012478D+04	-2.100351D+03	1.261660D+02	4.481481D+02	1.514294D+03
2.278371D+04	9.417971D+02	-5.877401D+03	-1.443099D+03	1.145278D+03
XR	L/DE	SHPTOT	WFF	NMLB
6.760922D+03	4.444693D+00	2.759571D+03	2.760571D+03	2.903442D-02
SIGOF	CTSF	CPSF	AMTF	LANDAF
SIGOR	CTSR	CPSR	AMTR	LANDAR
5.841923D-02	8.002123D-02	8.375438D-03	7.514272D-01	-1.024385D-01
5.841923D-02	5.923041D-02	6.334440D-03	7.529086D-01	-1.012565D-01
MUF	VF	DFFR	DFF	AOF
MUR	VR	DFRF		AOR
1.800637D-01	8.860857D+00	8.070948D-01	1.111182D+00	4.674257D+00
1.838115D-01	6.488342D+00	2.188324D-03		3.443143D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
5.277546D+00	-9.981718D-02	-8.666944D-04	9.740325D+00	9.139088D+00
4.606136D+00	-9.778351D-01	-1.343372D+00	7.879054D+00	7.225988D+00
CAPVF	ALPHAF	BETAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
1.418773D+02	-2.652351D+01	3.600000D+02	3.387592D+02	5.278490D+00
1.449291D+02	-2.660170D+01	3.600000D+02	3.405878D+02	4.708784D+00

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CASE 12

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMTF	CTFP	A90F
RMTR	CTRP	A90RA
5.149574D-01	7.458207D-02	2.288174D+00
5.142205D-01	5.513422D-02	1.723654D+00

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
1.885642D+01	1.533150D+03	2.792367D+03	3.007124D-02
1.393946D+01	1.159217D+03	2.793367D+03	5.262466D+02

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
5.439174D+02	1.499900D+04	1.139350D+05	1.079530D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-4.579067D-02	-2.171344D-01	4.642560D-02	2.790088D-01
-2.729147D-03	1.754976D-01	-9.374201D-03	-3.704315D-01
3.845118D-02	-1.597358D-01	-2.596692D-02	5.219039D+00
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
-9.874582D-04	-8.006763D-01	4.211869D-01	-9.699042D+00
-3.440208D-03	-3.538533D+00	2.258629D-03	-4.669450D-01
-9.191446D-01	-3.863994D-01	1.106367D-01	-1.247570D+02
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-2.686832D-03	1.319473D-01	4.532761D-01	-4.545205D-02
1.163989D-03	-1.226190D+00	-6.135949D-03	1.579901D-01
-5.667251D-03	-3.890556D-01	1.429419D-03	-7.692250D-01
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
4.086929D-03	-1.462218D-01	-8.982025D-02	3.647925D-02
-1.621039D-01	8.731237D-03	1.023075D+00	-2.200262D+01
3.471111D-03	6.019112D-02	2.435053D-01	4.711394D-01
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
8.635998D-04	-3.196363D-01	-9.132178D-02	-1.503435D-02
-1.849683D-02	1.860600D-01	3.833215D-01	-2.510605D+00
1.708046D-03	9.745103D-02	-7.109672D-02	2.318358D-01
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
-2.503403D-04	-6.333888D-02	7.711315D-02	1.916414D-03
4.338784D-03	-2.430834D-01	1.062173D-02	5.889100D-01
-1.231224D-03	-1.006445D-01	1.340063D-01	-1.671160D-01

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	-0.268D-05	-0.189D-02	0.992D-04	0.135D-01	-0.120D-02	0.528D-01
CTR	0.572D-05	0.403D-02	0.896D-04	0.122D-01	0.202D-02	0.459D-01
CHF	0.255D-05	0.180D-02	0.109D-04	0.148D-02	-0.181D-03	0.653D-02
CHR	0.242D-05	0.171D-02	0.808D-05	0.110D-02	0.189D-03	0.509D-02
ALF	0.565D-03	0.398D+00	0.634D-03	0.861D-01	-0.817D-01	0.564D+00
AIR	0.519D-03	0.366D+00	0.551D-03	0.748D-01	-0.649D-01	0.531D+00
VFR	-0.604D-01	-0.426D+02	0.204D+00	0.277D+02	-0.259D+01	0.979D+02
VRR	-0.280D-01	-0.197D+02	0.178D+00	0.242D+02	0.410D+01	0.629D+02
LF			0.422D+02	0.573D+04		
DF			-0.435D+00	-0.590D+02		
MF			0.217D+02	0.294D+04		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.296D-05	-0.402D-03	-0.416D-04	-0.369D-04	0.498D-02
CYR	0.204D-05	0.276D-03	-0.866D-05	-0.504D-04	0.369D-02
BIF	0.124D-03	0.168D-01	-0.707D-01	-0.140D-01	0.105D+01
BIR	-0.116D-03	-0.157D-01	0.747D-01	-0.468D-02	0.104D+01
YF	-0.761D+02	-0.103D+05			
LF	-0.153D+03	-0.208D+05			
NF	0.476D+03	0.646D+05			
CTF					-0.346D-03
CTR					-0.267D-03

FORCE = 0.241446D+07

X	BICF	BICR	OMEGAF	OMEGAR
Z	0.0	0.0	0.0	0.0
M	0.0	0.0	0.0	0.0
Y	0.0	0.0	0.0	0.0
L	0.0	0.0	0.0	0.0
N	0.0	0.0	0.0	0.0
CTF	0.0	0.0	0.0	0.0
CTR	0.0	0.0	0.0	0.0
CHF	0.0	0.0	0.0	0.0
CHR	0.0	0.0	0.0	0.0
AIF	0.0	0.0	0.0	0.0
AIR	0.0	0.0	0.0	0.0
VFR	0.0	0.0	0.0	0.0
VRR	0.0	0.0	0.0	0.0
QF	0.0	0.0	0.0	0.0
QR	0.0	0.0	0.0	0.0
QFU	QFELTAC	QFP	QFDELB	QFDELTAC
QFV	QFBETA	QFQ	QFDELS	QFBETA
QFW	QFALPHA	QFR	QFDELR	QFALPHA
-0.854D-02		-0.447D+00	0.120D+01	0.254D+01
0.103D-02		0.216D+01	-0.215D-01	0.139D+00
0.747D-01		-0.114D+01	-0.335D-01	0.101D+02
QRU	QRDELTA	QRP	QRDELB	QRDELTA
QRV	QRBETA	QRQ	QRDELS	QRBETA
QRW	QRALPHA	QRR	QRDELR	QRALPHA
0.612D-03		0.834D+00	-0.116D+01	0.202D+01
-0.178D-02		0.443D+01	0.149D-01	-0.242D+00
0.824D-01		0.104D+01	-0.228D-01	0.112D+02

V	RC	GM	RHO	XF LM
FE	ALPHA	ALFF	THETA	LF LM
1.023000D+02	2.186000D+03	1.750000D+04	2.378000D-03	3.432384D+03
4.400000D+01	-1.194996D+01	-1.409875D+01	3.093991D-01	1.095433D+04
VTF	CGF	BETAF	PSI	XR LM
VTR	CGL	PHI	GAMMA	LR LM
7.050000D+02	3.809958D+01	0.0	1.459859D-01	2.475230D+03
7.050000D+02	0.0	-7.017556D-01	1.217318D+01	7.712794D+03
THEOF	AICF	BITF	BICF	DFW
THEOR	AICR	BITR	BICR	LEFW
1.944812D+01	-1.492450D+00	1.600000D+00	1.600000D+00	1.851798D+03
1.805091D+01	-2.014585D+00	1.600000D+00	1.600000D+00	-1.666693D+03
THEIAC	DELTAB	DELTAS	DELTAR	DELTAC
1.874952D+01	-1.238493D+00	1.660975D-01	-7.303751D-01	9.108152D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.145078D+04	8.112549D+02	-1.957306D+02	2.434744D+03	-1.108542D+02
8.085307D+03	4.916918D+02	-2.255339D+02	1.843415D+03	-6.716442D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
3.086026D+04	-2.014003D+03	1.883592D+02	6.150194D+02	1.551264D+03
2.230374D+04	1.466567D+03	-8.073866D+03	-1.351762D+03	1.121151D+03
XR	L/DE	SHPTOT	WFF	NMLB
5.592952D+03	5.413965D+00	2.772415D+03	2.773415D+03	3.605654D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	8.123636D-02	8.579921D-03	7.786945D-01	-1.002809D-01
5.841923D-02	5.747464D-02	6.200997D-03	7.800864D-01	-9.771124D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
2.281014D-01	7.514148D+00	1.000077D+00	1.045525D+00	4.684686D+00
2.317935D-01	5.263127D+00	9.412404D-05		3.289300D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
3.956326D+00	-1.799892D-01	3.672697D-01	8.317658D+00	1.033672D+01
2.994433D+00	-1.090584D+00	5.609946D-03	6.028574D+00	7.853877D+00
CAPVF	ALPHAF	BETAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
1.727787D+02	-2.145011D+01	3.600000D+02	3.425064D+02	3.960419D+00
1.753630D+02	-2.127279D+01	3.600000D+02	3.440445D+02	3.186848D+00

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CASE 13

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTF	CTFP	A90F	
RMTR	CTRP	A90RA	
4.849483D-01	7.766220D-02	1.768656D+00	
4.846874D-01	5.468089D-02	1.241619D+00	

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	HMLB
DELHPR	RHPR	WFF	RP
3.562717D+01	1.586892D+03	2.833127D+03	3.609577D-02
2.508460D+01	1.146235D+03	2.834127D+03	6.316760D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

V	RC	GW	RH0	XF LM
FE	ALPHA	ALFF	THETA	LF LM
1.210000D+02	1.517000D+03	1.750000D+04	2.378000D-03	2.767796D+03
4.490000D+01	-8.375815D+00	-9.867043D+00	-1.215622D+00	1.112401D+04
VTF	CGF	BETAF	PSI	XR LM
VTR	CGL	PHI	GAMMA	LR LM
7.050000D+02	3.809958D+01	0.0	8.664204D-02	2.060822D+03
7.050000D+02	0.0	-8.649550D-01	7.106758D+00	7.572910D+03
THEOF	AICF	B1TF	BICF	DFW
THEOR	AICR	B1TR	BICR	FFW
1.949811D+01	-1.682992D+00	2.800000D+00	2.800000D+00	2.370620D+03
1.834221D+01	-2.040185D+00	4.000000D+00	4.000000D+00	-1.404225D+03
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.892016D+01	-1.771593D+00	1.355652D-01	-8.051022D-01	9.240435D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.143657D+04	7.803897D+02	-2.171316D+02	2.341525D+03	-3.447524D+01
7.842944D+03	2.901384D+02	-2.102265D+02	8.803730D+02	-5.973113D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
3.028279D+04	-1.734565D+03	2.770513D+02	8.373211D+02	1.522237D+03
2.216650D+04	2.140787D+03	-9.876335D+03	-8.941615D+02	1.114252D+03
XR	L/DE	SHPTOT	WFF	NMLB
4.567593D+03	6.256403D+00	2.736488D+03	2.737488D+03	4.386152D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	8.165417D-02	8.419370D-03	8.079471D-01	-9.809621D-02
5.841923D-02	5.596831D-02	6.162838D-03	8.079302D-01	-9.348926D-02
MUF	VF	DFFR	DFF	AOF
MUR	VR	DFRF		AOR
2.758808D-01	6.427920D+00	1.142698D+00	9.990702D-01	4.651076D+00
2.794994D-01	4.378402D+00	3.011712D-07		3.179687D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
3.804661D+00	-5.338472D-02	2.325677D-01	7.921644D+00	1.129251D+01
1.428918D+00	-9.708345D-01	1.275210D+00	4.195766D+00	8.469147D+00
CAPVF	ALPHAF	BETAFW	AT1PF	BPTPF
CAPVR	ALPHAR	BETARN	AT1PR	BPTPR
2.043617D+02	-1.787581D+01	3.902153D-02	3.459288D+02	3.805036D+00
2.064308D+02	-1.734191D+01	3.851633D-02	3.460531D+02	1.727520D+00

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMTF	CTFP	A90F
RMTR	CTRP	A90RA
4.546141D-01	7.886514D-02	1.189321D+00
4.557291D-01	5.368917D-02	8.358874D-01

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
5.692575D+01	1.579162D+03	2.832167D+03	4.270838D-02
3.875345D+01	1.153005D+03	2.833167D+03	7.473967D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

CATALOG OF TRIM & STABILITY DERIVATIVE DATA

A-97 TRIM ANALYSIS (CH-46E)

GW = 17,500 lb CG = 40 in. fwd

<u>ALTITUDE</u>	<u>AIRSPEED</u>	<u>CLIMB RATE</u>	<u>SIDESLIP</u>	<u>DERIVATIVES</u>
0 ft	50 kt	0 ft/min	-45 deg	
			-30	X
			-15	
			0	
			15	
			30	X
	95		45	
			-30	
			-20	X
			-10	
			0	
			10	
	140		20	X
			30	
			-10	X
			- 7	
			- 4	
			0	
			4	
			7	
			10	X

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V	RC	GM	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
5.000000D+01	0.0	1.750000D+04	2.378000D-03	1.772341D+03
4.400000D+01	-6.236416D+00	-1.692176D+01	4.100297D+00	1.119414D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	3.809958D+01	-4.500000D+01	4.502323D+01	1.926327D+03
7.050000D+02	0.0	-1.032663D+01	0.0	8.159022D+03
THEOF	AICF	B1IF	BICF	DFW
THEOR	AICR	B1IR	B1CR	LFFW
1.496215D+01	4.079687D-01	-2.500000D+00	-2.500000D+00	5.059253D+02
1.450009D+01	1.997585D+00	-2.500000D+00	-2.500000D+00	-2.442937D+03
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.473112D+01	9.550904D-02	-5.391216D-01	5.213020D-01	5.993118D+00
IF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.130530D+04	8.001380D+02	4.241911D+02	2.239212D+03	1.454419D+03
8.360870D+03	6.133759D+02	9.388942D+01	2.618026D+03	6.229749D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.536611D+04	-2.483439D+03	2.797863D+03	-1.246668D+03	7.724139D+02
1.389881D+04	2.375522D+02	-2.109491D+03	-9.382004D+03	6.986568D+02
XR	L/DE	SHPTOT	WFF	NMLB
3.613292D+03	2.643892D+00	1.571071D+03	1.572071D+03	3.180519D-02
SIGOF	CTSF	CPSF	AMTF	LANDAF
SIGOR	CTSR	CPSR	AMTR	LANDAR
5.841923D-02	8.023655D-02	4.272160D-03	7.060270D-01	-4.788993D-02
5.841923D-02	5.942321D-02	3.864215D-03	7.074288D-01	-5.222612D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF	DFR	AOR
1.175463D-01	1.455811D+01	8.605284D-01	9.235778D-01	4.371801D+00
1.181931D-01	1.057689D+01	2.796694D-01		3.209181D+00
AIF	BIF	BETAOF	B18OF	A27OF
AIR	BIR	BETAOR	B18OR	A27OR
4.227744D+00	-9.705907D-01	6.869257D-02	8.526584D+00	6.038057D+00
2.254036D+00	3.747647D+00	9.331660D-01	5.408517D+00	4.881787D+00
CAPVF	ALPHA	BETAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
8.506551D+01	-1.304521D+01	3.140758D+02	3.484913D+02	4.337726D+00
8.736030D+01	-1.748000D+01	3.143987D+02	3.490176D+02	4.373275D+00

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CASE 15

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMTF	CTFP	A90F
RMTR	CIRP	A90RA
5.555915D-01	7.936238D-02	2.348117D+00
5.515047D-01	5.784449D-02	1.707376D+00

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
4.337357D+00	7.767513D+02	1.578569D+03	3.165420D-02
3.161350D+00	7.018181D+02	1.579569D+03	5.539484D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

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V	RC	GW	RHO	XF LM
FE	ALPHA	ALFF	THETA	LF LM
5.000000D+01	0.0	1.750000D+04	2.378000D-03	9.244971D+02
4.400000D+01	-1.663397D-01	-8.601553D+00	3.176847D+00	1.036250D+04
VTF	CGF	BETAF	PSI	XR LM
VTR	CGL	PHI	GAMMA	LR LM
7.050000D+02	3.809958D+01	-3.000000D+01	2.985120D+01	1.708283D+03
7.050000D+02	0.0	-5.746887D+00	0.0	7.568455D+03
THEOF	AICF	B1TF	B1CF	DIW
THEOR	AICR	B1TR	B1CR	LFWM
1.385311D+01	-3.335414D-01	-2.500000D+00	-2.500000D+00	3.254197D+02
1.397627D+01	1.770918D+00	-2.500000D+00	-2.500000D+00	-7.232211D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.391469D+01	-7.536405D-01	-6.817849D-01	3.402791D-01	5.360225D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.037537D+04	7.666470D+02	1.469543D+02	2.414248D+03	7.237542D+02
7.735790D+03	5.977376D+02	1.231028D+02	2.672160D+03	7.727147D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.187290D+04	-7.241628D+02	1.730283D+03	9.740702D+02	5.968196D+02
1.243190D+04	3.233187D+02	-1.829663D+03	-3.796832D+03	6.249192D+02
XR	L/DE	SHPTOT	WFF	NMLB
1.358343D+03	2.413763D+00	1.321739D+03	1.322739D+03	3.780036D-02
SIGOF	CISF	CPSF	AMTF	LANDAF
SIGOR	CISR	CPSR	AMTR	LANDAR
5.841923D-02	7.326251D-02	3.300962D-03	7.063162D-01	-3.876204D-02
5.841923D-02	5.490899D-02	3.456379D-03	7.087219D-01	-5.058812D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
1.185098D-01	1.360761D+01	1.231964D+00	9.280150D-01	3.869999D+00
1.190819D-01	9.775717D+00	1.470190D-01		2.927538D+00
A1F	B1F	BETA0F	B180F	A270F
A1R	B1R	BETA0R	B180R	A270R
3.979057D+00	-9.684602D-01	-1.708044D-01	7.785337D+00	5.274488D+00
3.122536D+00	3.268670D+00	-2.545175D-01	5.994428D+00	4.453834D+00
CAPVF	ALPHAF	BETAFW	AT1PF	BPTPF
CAPVR	ALPHAR	BETARW	AT1PR	BPTPR
8.466807D+01	-9.324149D+00	3.296441D+02	3.543127D+02	4.095218D+00
8.785341D+01	-1.713756D+01	3.298052D+02	3.559562D+02	4.520447D+00

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTF	CTFP	A90F	
RMTR	CTRP	A90RA	
5.553850D-01	7.346632D-02	1.886607D+00	
5.518491D-01	5.365759D-02	1.474370D+00	

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHTOT	NMLB
DELHPR	RHPR	WFF	RP
4.015123D+00	6.008347D+02	1.328686D+03	3.760285D-02
2.932524D+00	6.278517D+02	1.329686D+03	6.580499D+02

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
5.439174D+02	1.499900D+04	1.139350D+05	1.079530D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-2.704487D-02	5.176799D-02	7.076742D-02	3.989770D-01
-4.869259D-03	1.297042D+00	4.855569D-02	-3.566436D-01
4.574346D-02	-1.283479D-01	-9.884281D-03	3.350430D+00
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
-8.989249D-02	-5.000167D+00	6.470062D-01	-7.666877D+00
-7.904526D-03	-3.610281D+00	-7.723201D-01	5.789584D-01
-7.926927D-01	-1.353126D-01	2.572907D-01	-5.805992D+01
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-1.954785D-03	-3.195885D-01	4.343581D-01	3.941755D-03
6.668125D-03	-1.280214D+00	6.042294D-03	4.883996D-01
-6.832448D-03	-2.437250D-01	1.395379D-01	-5.004352D-01
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
2.384246D-02	-1.415636D+00	1.024940D-01	1.285271D-01
-1.200516D-01	-4.610183D-01	9.201685D-01	-8.793046D+00
-2.046244D-03	-2.083460D-01	2.320499D-01	-1.498749D-01
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
2.483460D-03	-7.091926D-01	-2.560815D-03	3.554286D-02
-2.247797D-03	-3.136486D-02	3.573636D-01	-1.646374D-01
-9.810742D-04	-4.634161D-02	-5.790813D-02	-7.185771D-02
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
2.383312D-04	-1.713533D-03	3.426406D-02	3.708304D-03
7.168235D-04	-1.289925D-01	8.963545D-03	5.250295D-02
1.675712D-03	-3.481372D-02	1.192153D-01	1.227357D-01

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	0.452D-05	0.319D-02	0.875D-04	0.641D-02	0.120D-02	0.447D-01
CTR	0.909D-05	0.641D-02	0.819D-04	0.600D-02	0.207D-02	0.332D-01
CHR	0.220D-05	0.155D-02	0.750D-05	0.549D-03	0.306D-03	0.427D-02
CHR	0.203D-05	0.143D-02	0.656D-05	0.481D-03	0.645D-04	0.327D-02
AIF	0.523D-03	0.369D+00	0.385D-03	0.282D-01	0.850D-01	0.333D+00
AIR	0.633D-03	0.446D+00	0.356D-03	0.261D-01	0.376D-01	0.295D+00
VFR	-0.112D+00	0.788D+02	0.288D+00	0.211D+02	0.427D+01	0.134D+03
VRR	-0.573D-01	0.404D+02	0.265D+00	0.194D+02	0.695D+01	0.912D+02
LF			0.216D+02	0.158D+04		
DF			0.509D+00	0.373D+02		
MF			0.118D+02	0.862D+03		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CVF	-0.191D-05	0.140D-03	0.197D-03	0.533D-04	0.448D-02
CYR	0.110D-05	0.807D-04	0.124D-03	0.626D-05	0.325D-02
BIF	0.296D-03	0.217D-01	0.787D-01	0.134D-01	0.884D+00
BIR	-0.335D-03	0.246D-01	0.474D-01	0.733D-03	0.890D+00
YF	-0.580D+02	0.425D+04			
LF	0.445D+02	0.326D+04			
NF	0.847D+02	0.620D+04			
CTF					0.383D-02
CTR					-0.522D-02

FORCE = 0.241446D+07

X	BICF	BICR	OMEGAF	OMEGAR
Z	0.0	0.0	0.0	0.0
M	0.0	0.0	0.0	0.0
Y	0.0	0.0	0.0	0.0
L	0.0	0.0	0.0	0.0
N	0.0	0.0	0.0	0.0
CTF	0.0	0.0	0.0	0.0
CTR	0.0	0.0	0.0	0.0
CHF	0.0	0.0	0.0	0.0
CHR	0.0	0.0	0.0	0.0
AIF	0.0	0.0	0.0	0.0
AIR	0.0	0.0	0.0	0.0
VFR	0.0	0.0	0.0	0.0
QF	0.0	0.0	0.0	0.0
QR	0.0	0.0	0.0	0.0
QFU	QFDEL	QFDEL	QFDEL	QFDEL
QFV	QFDEL	QFDEL	QFDEL	QFDEL
QFW	QFDEL	QFDEL	QFDEL	QFDEL
-0.457D-02	0.529D+00	0.462D+00	0.960D+00	0.960D+00
0.251D-02	0.297D+01	-0.415D-01	0.184D+00	0.184D+00
-0.264D-01	-0.203D+00	-0.616D-01	-0.194D+01	-0.194D+01
QRU	QRP	QRDEL	QRDEL	QRDEL
QRV	QRQ	QRDEL	QRDEL	QRDEL
QRW	QRR	QRDEL	QRDEL	QRDEL
-0.729D-03	-0.125D+00	-0.561D+00	0.104D+01	0.104D+01
-0.160D-02	0.264D+01	0.115D-01	-0.117D+00	-0.117D+00
0.155D-01	0.259D+00	-0.370D-01	0.113D+01	0.113D+01

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V	RC	GM	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
5.000000D+01	0.0	1.750000D+04	2.378000D-03	5.440625D+02
4.400000D+01	1.950545D+00	-5.707365D+00	2.721148D+00	1.004348D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	3.809958D+01	-1.500000D+01	1.487342D+01	1.751814D+03
7.050000D+02	0.0	-2.932507D+00	0.0	7.324881D+03
THEOF	AICF	B1TF	BICF	DFW
THEOR	AICR	B1TR	BICR	LFFW
1.331416D+01	3.445326D-01	-2.500000D+00	-2.500000D+00	3.719390D+02
1.390930D+01	1.725115D+00	-2.500000D+00	-2.500000D+00	-9.861093D+01
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.361173D+01	-1.357700D+00	-4.628573D-01	4.731353D-01	5.125370D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.002801D+04	7.787916D+02	1.664048D+02	2.575097D+03	8.465276D+02
7.507415D+03	6.012106D+02	1.798899D+02	2.697433D+03	1.076109D+03
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.028140D+04	-8.589417D+01	9.176497D+02	1.326283D+03	5.168190D+02
1.224397D+04	3.750799D+02	-1.976361D+03	-3.738039D+03	6.154722D+02
XR	L/DE	SHPTOT	WFF	NHLB
6.073499D+02	2.358963D+00	1.232291D+03	1.233291D+03	4.054193D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	7.101260D-02	2.858485D-03	7.077282D-01	-3.453333D-02
5.841923D-02	5.330196D-02	3.404128D-03	7.096987D-01	-5.220526D-02
MUF	VF	DFFR	DFF	AOF
MUR	VR	DFRF		AOR
1.188144D-01	1.325531D+01	1.524387D+00	9.636566D-01	3.731982D+00
1.193493D-01	9.417461D+00	3.964018D-02		2.836803D+00
A1F	B1F	BETAOF	B18OF	A270F
A1R	B1R	BETAOR	B18OR	A270R
4.398457D+00	2.356924D-01	-7.656997D-01	8.051880D+00	4.967583D+00
3.779970D+00	2.825744D+00	-1.017571D+00	6.551723D+00	4.320751D+00
CAPVF	ALPHAF	BETAFW	AT1PF	BPTPF
CAPVR	ALPHAR	BETARW	AT1PR	BPTPR
8.449506D+01	-7.541495D+00	3.449525D+02	-3.150988D+00	4.404768D+00
8.848579D+01	-1.802879D+01	3.449525D+02	-1.269485D+00	4.719428D+00

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CASE 16

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMIF	CTFP	A90F	
RMTR	CTRP	A90RA	
5.547612D-01	7.120458D-02	1.728226D+00	
5.523307D-01	5.193073D-02	1.424863D+00	

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
3.891513D+00	5.207105D+02	1.239021D+03	4.032190D-02
2.838147D+00	6.183104D+02	1.240021D+03	7.056333D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

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V	RC	GW	RHO	XF LM
FE	ALPHA	ALFF	THETA	LF LM
5.000000D+01	0.0	1.750000D+04	2.378000D-03	4.322979D+02
4.400000D+01	2.477197D+00	-5.292865D+00	2.563544D+00	1.005718D+04
VTF	CGF	BETAF	PSI	XR LM
VTR	CGL	PHI	GAMMA	LR LM
7.050000D+02	3.809958D+01	0.0	-9.533098D-03	1.809881D+03
7.050000D+02	0.0	-2.278758D-01	0.0	7.359894D+03
THEOF	AICF	B1TF	BICF	DFW
THEOR	AICR	B1TR	BICR	LFFW
1.325333D+01	4.076716D-01	-2.500000D+00	-2.500000D+00	3.700027D+02
1.389470D+01	3.292231D-01	-2.500000D+00	-2.500000D+00	-1.341917D+02
THETAC	DELTA	DELTA	DELTA	DELTA
1.357401D+01	-1.487774D+00	2.929016D-02	1.431984D-01	5.096135D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.003459D+04	8.005804D+02	8.285086D+01	2.68845D+03	5.527440D+02
7.554795D+03	6.072707D+02	5.499747D+01	2.631904D+03	3.860667D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.006970D+04	-1.180741D+02	4.391359D+01	1.230013D+02	5.061773D+02
1.225836D+04	3.754569D+02	-1.387756D+03	-2.433821D+01	6.161956D+02
XR	L/DE	SHPTOT	WFF	NMLB
4.226580D+02	2.321383D+00	1.222373D+03	1.223373D+03	4.087061D-02
SIGOF	CTSF	CPSF	AMTF	LANDAF
SIGOR	CTSR	CPSR	AMTR	LANDAR
5.841923D-02	7.165991D-02	2.799627D-03	7.080502D-01	-3.350741D-02
5.841923D-02	5.352143D-02	3.408129D-03	7.098237D-01	-5.315656D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
1.188843D-01	1.329676D+01	1.606669D+00	1.008079D+00	3.771346D+00
1.194100D-01	9.451346D+00	6.808184D-42		2.880002D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
4.369992D+00	8.975021D-01	-6.506456D-01	8.081366D+00	5.010281D+00
4.277276D+00	6.268516D-01	-1.469722D+00	7.100266D+00	4.280320D+00
CAPVF	ALPHAF	BETAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
8.444700D+01	-7.022803D+00	3.600000D+02	-2.652810D+00	4.461204D+00
8.872553D+01	-1.841123D+01	3.600000D+02	-2.455268D-01	4.322966D+00

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CASE 17

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTF	CTFP	A90F	
RMTR	CTRP	A90RA	
5.541844D-01	7.130176D-02	1.753447D+00	
5.542831D-01	5.217896D-02	1.517707D+00	

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
3.896824D+00	5.100742D+02	1.229121D+03	4.064639D-02
2.851714D+00	6.190473D+02	1.230121D+03	7.113119D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

V	RC	GN	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
5.000000D+01	0.0	1.750000D+04	2.378000D-03	4.874982D+02
4.400000D+01	2.151523D+00	-5.513351D+00	2.769788D+00	1.006070D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	3.809958D+01	1.500000D+01	-1.489089D+01	1.764246D+03
7.050000D+02	0.0	2.300813D+00	0.0	7.341657D+03
THEOF	AICF	B1TF	BICF	DFW
THEOR	AICR	B1IR	BICR	LFFW
1.336478D+01	4.909216D-01	-2.500000D+00	-2.500000D+00	3.537995D+02
1.385551D+01	-1.187204D+00	-2.500000D+00	-2.500000D+00	-1.262554D+02
THETAC	DELTAR	DELTAS	DELTAR	DELTAC
1.361015D+01	-1.275996D+00	5.597393D-01	-1.707038D-01	5.124144D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.004041D+04	8.034147D+02	1.539693D+01	2.789546D+03	3.425155D+02
7.52224D+03	5.816588D+02	-7.978422D+01	2.513337D+03	-2.469518D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.029836D+04	-1.128839D+02	-7.949503D+02	-1.210920D+03	5.176717D+02
1.213864D+04	3.582900D+02	-1.802182D+03	3.067463D+03	6.101778D+02
XR	L/DE	SHPTOT	WFF	NMLB
5.441063D+02	2.348101D+00	1.227850D+03	1.228850D+03	4.068846D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LANDAR
5.841923D-02	7.173812D-02	2.863201D-03	7.083611D-01	-3.415879D-02
5.841923D-02	5.326451D-02	3.374845D-03	7.080503D-01	-5.203564D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF	DF	AOR
1.188652D-01	1.327278D+01	1.532407D+00	9.621011D-01	3.760936D+00
1.193831D-01	9.449809D+00	3.965467D-02		2.810014D+00
AIF	B1F	BETAOF	B180F	A270F
AIR	B1R	BETAOR	B180R	A270R
4.232316D+00	1.718678D+00	-5.612632D-01	7.928472D+00	5.103493D+00
3.840263D+00	-1.447155D+00	-1.073242D+00	6.598719D+00	4.176303D+00
CAPVF	ALPHAF	BETAFW	AT1PF	BPTPF
CAPVR	ALPHAR	BETARW	AT1PR	BPTPR
8.449408D+01	-7.349086D+00	1.510839D+01	-3.116162D+00	4.567970D+00
8.846156D+01	-1.793043D+01	1.504130D+01	-1.008214D+00	4.103886D+00

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CASE 18

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTR	CTFP	A90F	
5.533119D-01	CTR	A90RA	
5.552290D-01	7.132671D-02	1.704479D+00	
	5.204967D-02	1.454332D+00	

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
3.898188D+00	5.215699D+02	1.234592D+03	4.046642D-02
2.844648D+00	6.130225D+02	1.235592D+03	7.081624D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

V	RC	GM	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
5.000000D+01	0.0	1.750000D+04	2.378000D-03	8.195490D+02
4.400000D+01	1.983234D-01	-8.145151D+00	3.349398D+00	1.031746D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	3.809958D+01	3.000000D+01	-2.983268D+01	1.688120D+03
7.050000D+02	0.0	5.413936D+00	0.0	7.468211D+03
THEOF	AICF	BITF	BICF	DFW
THEOR	AICR	BITR	BICR	LFFW
1.382162D+01	4.536576D-01	-2.500000D+00	-2.500000D+00	2.519444D+02
1.390033D+01	-1.971011D+00	-2.500000D+00	-2.500000D+00	-5.661754D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.386098D+01	-7.188614D-01	8.117320D-01	-3.707735D-01	5.318586D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.031865D+04	8.044272D+02	-9.259052D+01	2.791863D+03	-5.650392D+01
7.636068D+03	5.607033D+02	-1.273641D+02	2.336850D+03	-5.520680D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.170981D+04	-5.652999D+02	-1.677693D+03	-8.083978D+02	5.886215D+02
1.228473D+04	2.539026D+02	-3.080278D+03	4.288941D+03	6.175210D+02
XR	L/DE	SHPTOT	WFF	NMLB
1.221587D+03	2.402108D+00	1.306142D+03	1.307142D+03	3.825138D-02
SIGOF	CTSF	CP5F	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LANDAR
5.841923D-02	7.353142D-02	3.255619D-03	7.082468D-01	-3.800720D-02
5.841923D-02	5.416134D-02	3.415460D-03	7.054869D-01	-4.998889D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF	DF	AOR
1.186037D-01	1.355104D+01	1.248544D+00	9.237110D-01	3.913867D+00
1.191513D-01	9.660343D+00	1.471609D-01		2.876959D+00
A1F	B1F	BETA0F	B180F	A270F
A1R	B1R	BETA0R	B180R	A270R
3.963041D+00	2.212245D+00	-1.169597D-01	7.813423D+00	5.386288D+00
2.831909D+00	-2.683499D+00	-1.034094D-02	5.655923D+00	4.194386D+00
CAPVF	ALPHA F	BETAFM	AT1PF	BP1PF
CAPVR	ALPHA R	BETARW	AT1PR	BP1PR
8.465771D+01	-8.999332D+00	3.032932D+01	-5.338636D+00	4.538692D+00
8.781023D+01	-1.693672D+01	3.017539D+01	-3.969767D+00	3.901394D+00

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTR	CTFP	A90F	
5.525568D-01	CTRP	A90RA	
5.554848D-01	7.314703D-02	1.887029D+00	
	5.294689D-02	1.538886D+00	

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
3.997673D+00	5.926191D+02	1.313034D+03	3.805077D-02
2.893683D+00	6.204146D+02	1.314034D+03	6.658885D+02

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
5.439174D+02	1.499900D+04	1.139350D+05	1.079530D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-2.302187D-02	1.083341D-02	2.845174D-02	4.123772D-01
2.894139D-04	1.372679D+00	-6.303176D-02	2.119810D-02
4.154334D-02	-9.340487D-02	-3.867521D-02	3.042838D+00
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
-9.520813D-02	-4.211573D+00	6.666820D-01	-7.672633D+00
1.342726D-03	-3.291895D+00	7.565976D-01	9.834789D-02
-7.847363D-01	-4.619917D-01	-2.193995D-01	-5.747794D+01
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-3.126742D-03	-3.137068D-01	4.383832D-01	1.649965D-03
-6.136262D-03	-1.161898D+00	-1.028924D-02	-4.494500D-01
-6.170110D-03	-2.640832D-01	-1.384853D-01	-4.519292D-01
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
-2.597230D-02	-1.352606D+00	-7.513818D-02	-1.136957D-01
-1.047486D-01	-4.445895D-02	9.135617D-01	-7.672300D+00
1.131243D-02	-7.592070D-02	2.423078D-01	8.285782D-01
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
-2.619609D-03	-6.308124D-01	-4.336736D-02	-5.270483D-02
1.165381D-03	7.592608D-02	3.519498D-01	8.535823D-02
7.744541D-03	9.043667D-03	-5.955024D-02	5.672483D-01
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
-7.771616D-05	-6.710439D-02	3.046538D-02	-2.303732D-03
-1.923752D-04	-1.318116D-01	1.182523D-02	-1.409050D-02
-4.944416D-03	-5.140738D-02	1.187665D-01	-3.621533D-01

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	0.276D-05	0.194D-02	0.873D-04	0.640D-02	0.106D-02	0.446D-01
CTR	0.965D-05	0.680D-02	0.817D-04	0.599D-02	0.186D-02	0.331D-01
CHF	0.206D-05	0.145D-02	0.784D-05	0.574D-03	0.301D-03	0.458D-02
CHR	0.198D-05	0.140D-02	0.604D-05	0.443D-03	0.403D-04	0.296D-02
AlF	0.516D-03	0.364D+00	0.387D-03	0.284D-01	0.475D-01	0.335D+00
AlR	0.661D-03	0.466D+00	0.356D-03	0.261D-01	0.758D-01	0.293D+00
VFR	-0.119D+00	-0.837D+02	0.287D+00	0.210D+02	-0.378D+01	0.134D+03
VRR	-0.542D-01	-0.382D+02	0.264D+00	0.194D+02	0.631D+01	0.911D+02
LF			0.181D+02	0.133D+04		
DF			0.312D+01	0.228D+03		
MF			0.870D+02	0.637D+04		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.191D-05	-0.140D-03	-0.206D-03	-0.431D-04	0.447D-02
CYR	0.978D-06	0.717D-04	0.949D-04	-0.263D-04	0.318D-02
BIF	0.434D-03	0.318D-01	-0.426D-01	-0.741D-02	0.887D+00
BIR	-0.108D-03	-0.794D-02	0.843D-01	-0.689D-03	0.890D+00
YF	-0.500D+02	-0.366D+04			
LF	0.903D+02	0.661D+04			
NF	0.224D+02	0.164D+04			
CTF					-0.402D-02
CTR					0.517D-02

FORCE = 0.241446D+07

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X	BICF	BICR	OMEGAF	OMEGAR
Z	0.0	0.0	0.0	0.0
M	0.0	0.0	0.0	0.0
Y	0.0	0.0	0.0	0.0
L	0.0	0.0	0.0	0.0
N	0.0	0.0	0.0	0.0
CTF	0.0	0.0	0.0	0.0
CTR	0.0	0.0	0.0	0.0
CHF	0.0	0.0	0.0	0.0
CHR	0.0	0.0	0.0	0.0
AIF	0.0	0.0	0.0	0.0
AIR	0.0	0.0	0.0	0.0
VFR	0.0	0.0	0.0	0.0
QF	0.0	0.0	0.0	0.0
QR	0.0	0.0	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELR	QFALPHA
	-0.411D-02	-0.616D+00	0.453D+00	0.944D+00
	-0.284D-02	0.293D+01	0.291D-01	-0.208D+00
	-0.279D-01	-0.433D+00	0.434D-01	-0.204D+01
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELR	QRALPHA
	-0.292D-03	0.579D+00	-0.565D+00	0.104D+01
	0.220D-02	0.258D+01	-0.490D-02	0.161D+00
	0.168D-01	0.420D+00	0.283D-01	0.123D+01

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V	RC	GW	RH0	XF LW
FE	ALPHA	ALFF	THETA	LF LW
5.000000D+01	0.0	1.750000D+04	2.378000D-03	1.631463D+03
4.400000D+01	-5.683444D+00	-1.615446D+01	4.39320D+00	1.110178D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	3.809958D+01	4.500000D+01	-4.497266D+01	1.865992D+03
7.050000D+02	0.0	1.005736D+01	0.0	7.912743D+03
THEOF	AICF	BITF	BICF	DFW
THEOR	AICR	BITR	BICR	LFFW
1.477720D+01	-8.169071D-01	-2.500000D+00	-2.500000D+00	3.355788D+02
1.448963D+01	-3.393525D+00	-2.500000D+00	-2.500000D+00	-2.089235D+03
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.463341D+01	-4.102644D-02	8.556555D-01	-9.288129D-01	5.917375D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.119007D+04	8.327375D+02	-4.694066D+02	2.772041D+03	-1.259341D+03
8.111078D+03	5.512087D+02	-2.738600D+02	2.132380D+03	-1.195857D+03
QF	LFZ	YFY	LF	RHPF
QR	DFX	NF	NF	RHPR
1.467829D+04	-2.112198D+03	-2.847395D+03	5.230899D+02	7.378391D+02
1.388120D+04	1.270276D+02	-5.307733D+03	1.121481D+04	6.977717D+02
XR	L/DE	SHPTOT	WFF	NMLB
3.370271D+03	2.639079D+00	1.535611D+03	1.536611D+03	3.253914D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	7.931948D-02	4.080930D-03	7.086320D-01	-4.683648D-02
5.841923D-02	5.758786D-02	3.859320D-03	7.019162D-01	-5.112167D-02
MUF	VF	DFFR	DF	AQF
MUR	VR	DERF		AQR
1.177006D-01	1.444424D+01	8.730257D-01	9.159751D-01	4.314658D+00
1.183233D-01	1.028579D+01	2.809784D-01		3.114244D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
4.604851D+00	1.810363D+00	-3.630773D-01	8.850849D+00	6.068910D+00
1.038598D+00	-3.833352D+00	1.999788D+00	4.097213D+00	4.554467D+00
CAPVF	ALPHAF	BETAFFW	ATIPF	BPIPF
CAPVR	ALPHAR	BETARW	ATIPR	BPIPR
8.503194D+01	-1.261604D+01	4.587660D+01	3.494214D+02	4.947935D+00
8.730285D+01	-1.715683D+01	4.556652D+01	3.483552D+02	3.971558D+00

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTE	CTFP	A90F	
RMTR	CTRP	A90RA	
5.531723D-01	7.870753D-02	2.247200D+00	
5.563589D-01	5.609846D-02	1.792233D+00	

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
4.301568D+00	7.421407D+02	1.542978D+03	3.238387D-02
3.065924D+00	7.008377D+02	1.543978D+03	5.667178D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

V	RC	GW	RHO	XF LW
FE	ALPHA	ALFF	THEIA	LF LW
9.500000D+01	0.0	1.750000D+04	2.378000D-03	2.803108D+03
4.400000D+01	-1.209553D+01	-1.465952D+01	5.661694D-01	1.102407D+04
VIF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	3.809958D+01	-3.000000D+01	3.162116D+01	2.009924D+03
7.050000D+02	0.0	-2.135000D+01	0.0	8.048817D+03
THEOF	AICF	B1TF	BICF	DFW
THEOR	AICR	B1TR	BICR	LFFW
1.774612B+01	-1.579982D-01	-6.000000D-01	-6.000000D-01	1.767094D+03
1.719267D+01	5.039917D+00	-6.000000D-01	-6.000000D-01	-3.024004D+03
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.746940D+01	-1.570069D+00	-1.731483D+00	1.110830D+00	8.115811D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.133678D+04	9.300353D+02	5.651697D+02	2.527667D+03	2.119973D+03
8.265387D+03	7.117732D+02	4.725373D+02	2.975009D+03	2.408848D+03
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
2.415223D+04	-3.327151D+03	6.278252D+03	3.524841D+03	1.214069D+03
2.013705D+04	1.094207D+03	-6.737600D+03	-2.081828D+04	1.012237D+03
XR	L/DE	SHPTOT	WFF	NMLB
5.339140D+03	6.641003D+00	2.326306D+03	2.327306D+03	4.081973D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	8.061770D-02	6.714921D-03	7.726833D-01	-8.539008D-02
5.841923D-02	5.832602D-02	5.598602D-03	7.712251D-01	-8.308032D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
2.155816D-01	7.996943D+00	8.849592D-01	9.375570D-01	4.566433D+00
2.181569D-01	5.785262D+00	1.347527D-01		3.329572D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
5.298564D+00	8.122641D-01	-1.062374D+00	9.588410D+00	9.364237D+00
2.144275D+00	5.840465D+00	9.131623D-01	5.231327D+00	7.549819D+00
CAPVF	ALPHAF	BETAFW	AT1PF	BPTPF
CAPVR	ALPHAR	BETARW	AT1PR	BPTPR
1.607003D+02	-1.895623D+01	3.287359D+02	3.437030D+02	5.360462D+00
1.626070D+02	-1.894285D+01	3.291457D+02	3.430487D+02	6.221652D+00

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMIF	CTFP	A90F	
RMIR	CTRP	A90RA	
4.916807D-01	7.815665D-02	1.615200D+00	
4.854791D-01	5.706317D-02	1.149557D+00	

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	NFF	RP
2.943405D+01	1.243503D+03	2.377230D+03	3.994567D-02
2.149018D+01	1.033727D+03	2.378230D+03	6.990492D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

V	RC	GW	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
9.500000D+01	0.0	1.750000D+04	2.378000D-03	1.676329D+03
4.400000D+01	-4.249655D+00	-6.349122D+00	6.420034D-01	1.025623D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	3.809958D+01	-2.000000D+01	2.036824D+01	1.275066D+03
	0.0	-1.336496D+01	0.0	7.145693D+03
THEOF	AICF	B1TF	BICF	DFW
THEOR	AICR	B1TR	B1CR	LFFW
1.583046D+01	-7.003101D-01	3.000000D-01	3.000000D-01	1.318709D+03
1.506450D+01	3.990241D+00	3.000000D-01	3.000000D-01	-4.639478D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.544748D+01	-1.544639D+00	-1.571083D+00	7.742790D-01	6.548434D+00
TF	HF	YF	MHF	LHF
TP	HR	YR	MHR	LHR
1.037011D+04	6.791261D+02	2.186216D+02	1.970639D+03	1.129516D+03
7.243908D+03	4.609945D+02	3.833364D+02	2.033811D+03	2.283111D+03
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.711651D+04	-5.603918D+02	4.212980D+03	4.834149D+03	8.604021D+02
1.413663D+04	1.280704D+03	-8.684873D+03	-1.303944D+04	7.106113D+02
XR	L/DE	SHPTOT	MFF	NMLB
2.766139D+03	5.908401D+00	1.671013D+03	1.672013D+03	5.681773D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	7.378755D-02	4.758816D-03	7.729802D-01	-6.178710D-02
5.841923D-02	5.091779D-02	3.930335D-03	7.735398D-01	-6.201434D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
2.218349D-01	7.368638D+00	1.248282D+00	8.918043D-01	4.009083D+00
2.237283D-01	5.099016D+00	6.741762D-02		2.738970D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
3.640833D+00	5.976382D-01	7.920134D-02	7.400473D+00	8.038856D+00
1.811149D+00	4.625727D+00	6.914526D-01	4.343227D+00	6.090796D+00
CAPVF	ALPHA F	BETAFW	AT1PF	BPTPF
CAPVR	ALPHAR	BETARW	AT1PR	BPTPR
1.605265D+02	-1.302951D+01	3.395104D+02	3.498912D+02	3.689558D+00
1.623880D+02	-1.375862D+01	3.396915D+02	3.505615D+02	4.967657D+00

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMIF	CTFP	A90F	
RMIR	CTRP	A90RA	
4.885085D-01	7.271292D-02	1.167616D+00	
4.844744D-01	5.066035D-02	6.814431D-01	

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHTOT	NNLB
DELHPR	RHPR	WFF	RP
2.738393D+01	8.877860D+02	1.717476D+03	5.528154D-02
1.907886D+01	7.296901D+02	1.718476D+03	9.674269D+02

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
5.439174D+02	1.499900D+04	1.139350D+05	1.079530D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-4.882802D-02	-7.977222D-02	3.754786D-02	5.208414D-01
2.013317D-03	9.896151D-01	8.233503D-02	3.029301D-01
5.096604D-02	-1.724332D-01	-9.716560D-03	7.668512D+00
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
1.549311D-03	-2.195480D+00	6.124609D-01	-9.700548D+00
-5.320244D-02	-4.626952D+00	-1.167409D+00	-8.005008D+00
-9.169619D-01	3.140920D-01	2.873940D-01	-1.379690D+02
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-2.801801D-03	8.322123D-02	4.84532D-01	-1.859421D-02
-8.877025D-04	-1.434281D+00	4.512360D-03	-1.335665D-01
-3.330112D-03	-2.556180D-01	1.945666D-01	-5.010593D-01
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
4.684523D-02	-7.560204D-01	2.773856D-01	8.094379D-02
-1.500321D-01	-1.021660D+00	8.992879D-01	-2.257431D+01
-5.108314D-02	-3.042178D-01	3.557031D-01	-7.686131D+00
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
3.657039D-03	-5.629074D-01	5.152307D-02	-1.063192D-02
-3.411664D-03	-2.310602D-01	3.472185D-01	-5.133297D-01
-1.156795D-02	-8.107749D-02	-1.802603D-02	-1.740550D+00
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
-1.699060D-03	3.573529D-02	3.379871D-02	3.214793D-02
-1.748347D-03	-1.017460D-01	1.402049D-02	-2.630619D-01
5.942935D-03	-3.352631D-02	1.151935D-01	8.941928D-01

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CYF	-0.717D-05	-0.505D-02	0.104D-03	0.156D-01	-0.131D-02	0.547D-01
CTR	0.200D-05	0.141D-02	0.883D-04	0.133D-01	0.240D-02	0.433D-01
CHF	0.149D-05	0.105D-02	0.866D-05	0.130D-02	-0.256D-03	0.549D-02
CHR	0.143D-05	0.101D-02	0.596D-05	0.897D-03	0.108D-03	0.389D-02
AIF	0.384D-03	0.271D+00	0.771D-03	0.116D+00	-0.910D-01	0.687D+00
AIR	0.499D-03	0.352D+00	0.658D-03	0.990D-01	-0.401D-01	0.609D+00
VFR	-0.544D-01	0.384D+02	0.181D+00	0.272D+02	-0.238D+01	0.926D+02
VRR	-0.247D-01	0.174D+02	0.152D+00	0.229D+02	0.419D+01	0.721D+02
LF			0.342D+02	0.515D+04		
DF			0.481D+01	0.723D+03		
MF			0.147D+03	0.222D+05		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.220D-05	-0.331D-03	-0.121D-03	-0.583D-04	0.461D-02
CYR	0.142D-05	0.213D-03	0.529D-04	0.958D-05	0.272D-02
BIF	-0.116D-03	0.174D-01	-0.757D-01	-0.157D-01	0.986D+00
BIR	0.149D-03	0.224D-01	0.546D-01	0.191D-02	0.949D+00
YF	-0.729D+02	-0.110D+05			
LF	0.400D+02	0.602D+04			
NF	-0.174D+03	-0.262D+05			
CIF					0.558D-02
CTR					-0.713D-02

FORCE = 0.241446D+07

X	BICF	BICR	OMEGAF	OMEGAR
Z	0.0	0.0	0.0	0.0
M	0.0	0.0	0.0	0.0
Y	0.0	0.0	0.0	0.0
L	0.0	0.0	0.0	0.0
N	0.0	0.0	0.0	0.0
CTF	0.0	0.0	0.0	0.0
CTR	0.0	0.0	0.0	0.0
CHF	0.0	0.0	0.0	0.0
CHR	0.0	0.0	0.0	0.0
AIF	0.0	0.0	0.0	0.0
AIR	0.0	0.0	0.0	0.0
VFR	0.0	0.0	0.0	0.0
VRR	0.0	0.0	0.0	0.0
QF	0.0	0.0	0.0	0.0
QR	0.0	0.0	0.0	0.0
QFU	QFDELTAC	QFDELTAC	QFDELTAC	QFDELTAC
QFV	QFBETA	QFBETA	QFBETA	QFBETA
QFW	QFALPHA	QFALPHA	QFALPHA	QFALPHA
-0.588D-02	0.677D+00	0.636D+00	0.133D+01	0.133D+01
0.218D-02	0.266D+01	-0.139D-01	0.329D+00	0.329D+00
0.131D-02	-0.369D+00	-0.203D-01	0.198D+00	0.198D+00
QRU	QRDELTAC	QRDELTAC	QRDELTAC	QRDELTAC
QRV	QRDELTAC	QRDELTAC	QRDELTAC	QRDELTAC
QRW	QRALPHA	QRALPHA	QRALPHA	QRALPHA
-0.198D-02	-0.129D+01	-0.700D+00	0.121D+01	0.121D+01
0.141D-02	0.282D+01	0.415D-01	0.212D+00	0.212D+00
0.335D-01	0.220D+00	-0.115D+00	0.503D+01	0.503D+01

V	RC	GM	RHO	XF LM
FE	ALPHA	ALFF	THETA	LF LM
9.500000D+01	0.0	1.750000D+04	2.378000D-03	1.152877D+03
4.400000D+01	-3.180719D-01	-2.321407D+00	8.626087D-01	1.016737D+04
VTF	CGF	BETAF	PSI	XR LM
VTR	CGL	PHI	GAMMA	LR LM
7.050000D+02	3.809958D+01	-1.000000D+01	9.970708D+00	1.032228D+03
7.050000D+02	0.0	-6.558328D+00	0.0	7.160286D+03
THEOF	AICF	BIIF	BICF	DFW
THEOR	AICR	BITR	BICR	LEFW
1.487092D+01	-8.310822D-01	8.000000D-01	8.000000D-01	1.356918D+03
1.407683D+01	1.419929D+00	8.000000D-01	8.000000D-01	5.287751D+00
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.447387D+01	-1.600864D+00	-7.618728D-01	1.965573D-01	5.793701D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.021627D+04	5.765606D+02	4.174232D+01	1.720927D+03	6.329199D+02
7.224815D+03	3.704503D+02	1.363682D+02	1.522901D+03	1.108714D+03
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.401241D+04	-2.245090D+00	2.106511D+03	2.413920D+03	7.043674D+02
1.197053D+04	1.356927D+03	-4.817781D+03	-5.047358D+03	6.017274D+02
XR	L/DE	SHPTOT	WFF	NMLB
1.726811D+03	5.657746D+00	1.406095D+03	1.407095D+03	6.751500D-02
SIGOF	CISF	CPSF	AMTF	LAMDAF
SIGOR	CISR	CPSR	AMTR	LAMIDAR
5.841923D-02	7.266448D-02	3.895800D-03	7.732341D-01	-4.866896D-02
5.841923D-02	5.130889D-02	3.328107D-03	7.748734D-01	-5.169239D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
2.243557D-01	7.277144D+00	1.541021D+00	8.931760D-01	3.861721D+00
2.257899D-01	5.101740D+00	1.779931D-02		2.653816D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
2.932619D+00	5.192454D-01	6.039176D-01	6.515436D+00	7.449003D+00
2.120120D+00	2.205592D+00	3.008792D-01	4.557915D+00	5.546505D+00
CAPVF	ALPHAF	BETAFW	AT1PF	BPTPF
CAPVR	ALPHAR	BETARW	AT1PR	BPTPR
1.604645D+02	-9.699221D+00	3.498546D+02	3.531145D+02	2.978233D+00
1.622380D+02	-1.113851D+01	3.499197D+02	3.548020D+02	3.059337D+00

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CASE 21

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMIF	CIFP	A90F	
RMIR	CTRP	A90RA	
4.871028D-01	7.208297D-02	9.427058D-01	
4.859000D-01	5.076381D-02	5.104887D-01	

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
2.714669D+01	7.315140D+02	1.452359D+03	6.536581D-02
1.911782D+01	6.208452D+02	1.453359D+03	1.143902D+03

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

CASE 22

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V	RC	GW	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
9.59000D+01	0.0	1.75000D+04	2.37800D-03	9.597413D+02
4.40000D+01	1.053541D+00	-9.865874D-01	1.098939D+00	1.018497D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.05000D+02	3.809958D+01	0.0	-6.169134D-03	9.514881D+02
7.05000D+02	0.0	-3.460918D-01	0.0	7.178733D+03
THEOF	AICF	BITF	BICF	DFW
THEOR	AICR	BITR	BICR	LFFW
1.451354D+01	-6.204238D-01	1.00000D+00	1.00000D+00	1.351827D+03
1.376027D+01	-6.037609D-01	1.00000D+00	1.00000D+00	8.590344D+01
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.413691D+01	-1.664104D+00	1.693049D-03	-2.500480D-01	5.532485D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.021547D+04	5.466895D+02	-5.294863D+01	1.697390D+03	3.282396D+02
7.233928D+03	3.313924D+02	-4.762290D+01	1.256080D+03	9.689137D+01
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.288942D+04	1.107446D+02	1.142424D+02	3.413854D+02	6.479176D+02
1.132164D+04	1.350019D+03	-3.828986D+03	1.324592D+02	5.691093D+02
XR	L/DE	SHPTOT	WFF	NMLB
1.379560D+03	5.582062D+00	1.317027D+03	1.318027D+03	7.207744D-02
SIGOF	CISF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	7.279987D-02	3.583581D-03	7.734002D-01	-4.377557D-02
5.841923D-02	5.132251D-02	3.147699D-03	7.743553D-01	-4.787388D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
2.251191D-01	7.294105D+00	1.647109D+00	9.207741D-01	3.818349D+00
2.263630D-01	5.114477D+00	6.120917D-41		2.624672D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
2.757040D+00	5.329555D-01	8.082975D-01	6.341483D+00	7.384760D+00
2.039872D+00	1.573183D-01	3.862858D-01	4.485058D+00	5.408054D+00
CAPVF	ALPHAF	BETAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
1.604493D+02	-8.446459D+00	3.600 00D+02	-5.689419D+00	2.808080D+00
1.621349D+02	-1.017306D+01	3.60 00D+02	-3.906588D+00	2.045929D+00

CASE 22

PAGE 4

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTF	CTFP	A90F	
RMTR	CTRP	A90RA	
4.866894D-01	7.220773D-02	8.973861D-01	
4.871035D-01	5.089460D-02	5.227333D-01	

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
2.719367D+01	6.751113D+02	1.363388D+03	6.962831D-02
1.916707D+01	5.882764D+02	1.364388D+03	1.218495D+03

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

V	RC	GM	RHO	XF LW
FE	ALPHA	ALFF	THEIA	LF LW
9.500000D+01	0.0	1.750000D+04	2.378000D-03	1.106681D+03
4.400000D+01	-1.473800D-01	-2.150730D+00	8.487549D-01	1.018929D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	3.809958D+01	1.000000D+01	-9.969182D+00	1.033937D+03
7.050000D+02	0.0	5.388172D+00	0.0	7.168636D+03
THEOF	AICF	B1TF	BICF	DFW
THEOR	AICR	B1TR	BICR	FFW
1.476716D+01	-7.728342D-02	8.000000D-01	8.000000D-01	1.359033D+03
1.409223D+01	-2.705737D+00	8.000000D-01	8.000000D-01	1.131615D+01
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.442969D+01	-1.694114D+00	8.914721D-01	-6.434531D-01	5.759453D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.023188D+04	5.958101D+02	-8.638494D+01	1.955119D+03	1.962268D+02
7.234222D+03	3.527186D+02	-2.374569D+02	1.292725D+03	-9.415024D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.367841D+04	7.820320D+00	-1.794510D+03	-2.171048D+03	6.875778D+02
1.207452D+04	1.359058D+03	-4.857605D+03	4.010511D+03	6.069542D+02
XR	L/DE	SHPTOT	WFF	NMLB
1.677434D+03	5.639984D+00	1.394532D+03	1.395532D+03	6.807440D-02
SIGOF	CISF	CPSF	AMTF	LAMDAF
SIGOR	CISR	CPSR	AMTR	LAMDAR
5.841923D-02	7.231038D-02	3.802938D-03	7.735918D-01	-4.802972D-02
5.841923D-02	5.133311D-02	3.357016D-03	7.725607D-01	-5.114825D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
2.244668D-01	7.290091D+00	1.548525D+00	8.915176D-01	3.858046D+00
2.258727D-01	5.110466D+00	1.780544D-02		2.658317D+00
AIF	B1F	BETAOF	B180F	A270F
AIR	B1R	BETAOR	B180R	A270R
3.070358D+00	8.728135D-01	4.224312D-01	6.644124D+00	7.412900D+00
1.799526D+00	-1.872598D+00	6.365877D-01	4.253389D+00	5.414218D+00
CAPVF	ALPHA F	BETAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
1.604643D+02	-9.531336D+00	1.014046D+01	3.534230D+02	3.192006D+00
1.622199D+02	-1.099856D+01	1.007668D+01	3.546521D+02	2.597098D+00

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CASE 23

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMIF	CTFP	A90F	
RMTR	CTRP	A90RA	
4.867152D-01	7.223834D-02	9.421994D-01	
4.882537D-01	5.082302D-02	5.870510D-01	

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
2.720520D+01	7.147830D+02	1.440877D+03	6.588633D-02
1.914012D+01	6.260944D+02	1.441877D+03	1.153011D+03

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

V	RC	GW	RHO	XF LM
FE	ALPHA	ALFF	THETA	LF LM
9.500000D+01	0.0	1.750000D+04	2.378000D-03	1.536692D+03
4.400000D+01	-3.575931D+00	-5.663153D+00	9.312254D-01	1.027176D+04
VTF	CGF	BETAF	PSI	XR LM
VTR	CGL	PHI	GAMMA	LR LM
7.050000D+02	3.809958D+01	2.000000D+01	-2.024711D+01	1.248792D+03
	0.0	1.235430D+01	0.0	7.172320D+03
THEOF	AICF	B1TF	BICF	DFW
THEOR	AICR	B1TR	B1CR	LFFW
1.545953D+01	-8.581933D-01	3.000000D-01	3.000000D-01	1.236436D+03
1.503066D+01	-5.564721D+00	3.000000D-01	3.000000D-01	-4.325936D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.524510D+01	-1.808398D+00	1.547281D+00	-1.385476D+00	6.391547D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.036214D+04	7.046239D+02	-3.746950D+02	2.390834D+03	-7.521479D+02
7.267975D+03	4.221285D+02	-5.176105D+02	1.562003D+03	-2.295954D+03
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.590950D+04	-5.088694D+02	-3.888262D+03	-3.779834D+03	7.997290D+02
1.418431D+04	1.207047D+03	-7.956886D+03	1.325147D+04	7.130080D+02
XR	L/DE	SHPTOT	WFF	NMLB
2.576995D+03	5.929663D+00	1.612737D+03	1.613737D+03	5.886957D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	7.351674D-02	4.423238D-03	7.733902D-01	-5.933266D-02
5.841923D-02	5.111919D-02	3.943591D-03	7.683820D-01	-5.984518D-02
MUF	VF	DFFR	DF	A0F
MUR	VR	DFRF		A0R
2.223825D-01	7.363009D+00	1.275657D+00	8.843737D-01	3.968344D+00
2.241757D-01	5.119201D+00	6.780200D-02		2.742718D+00
A1F	B1F	BETA0F	B180F	A270F
A1R	B1R	BETA0R	B180R	A270R
4.066740D+00	2.131281D-01	-3.839835D-01	7.789894D+00	7.847684D+00
1.086608D+00	-4.378583D+00	1.450482D+00	3.648698D+00	5.789783D+00
CAPVF	ALPHAF	BETAFW	AT1FF	BPTPF
CAPVR	ALPHAR	BETARW	AT1PR	BPTPR
1.605235D+02	-1.239866D+01	2.045206D+01	3.509908D+02	4.072321D+00
1.623335D+02	-1.320095D+01	2.028124D+01	3.505107D+02	4.511397D+00

AD-A134 323

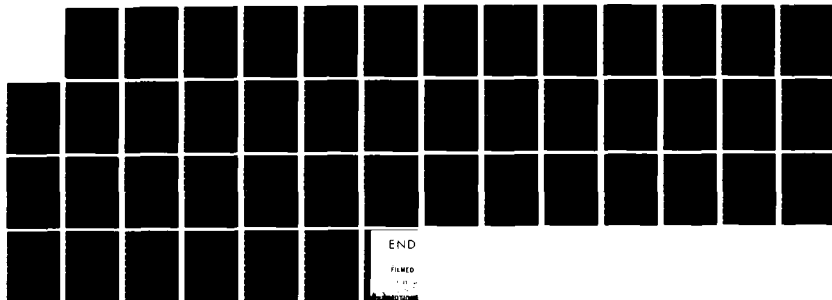
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VOLUME 4(U) BOEING VERTOL CO PHILADELPHIA PA 03 OCT 83
NADC-81118-60-VOL-4

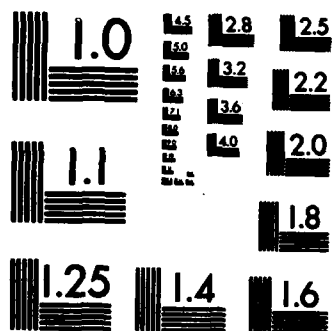
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UNCLASSIFIED

F/G 1/2

NL





MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

CASE 16

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMIF	CTFP	A90F	
RMIR	CTRP	A90RA	
4.885978D-01	7.282305D-02	1.102947D+00	
4.896995D-01	5.084913D-02	8.255661D-01	

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELMPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	NFF	RP
2.742540D+01	8.271544D+02	1.659312D+03	5.721815D-02
1.914995D+01	7.321579D+02	1.660312D+03	1.001318D+03

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
5.439174D+02	1.499900D+04	1.139350D+05	1.079530D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-4.831380D-02	-2.720592D-01	-2.498084D-02	5.433747D-01
2.431235D-03	1.137306D+00	-1.072828D-01	3.660721D-01
5.119402D-02	-6.349134D-02	-2.402940D-02	7.708304D+00
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
1.031482D-02	-2.251827D-01	6.473619D-01	-9.708123D+00
2.753562D-02	-4.045601D+00	1.192790D+00	4.146050D+00
-9.206560D-01	-8.422211D-01	-1.695531D-01	-1.386236D+02
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-2.548123D-03	1.782108D-01	4.918917D-01	-2.036263D-02
1.895478D-03	-1.266755D+00	-1.415482D-02	2.854029D-01
-3.595101D-03	-3.280208D-01	-1.969359D-01	-5.413158D-01
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
-3.350885D-02	-9.858956D-01	-3.206177D-01	-7.840987D-02
-1.643963D-01	5.395462D-01	9.091351D-01	-2.475321D+01
4.860681D-02	1.602331D-01	3.816261D-01	7.318747D+00
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
-1.977298D-03	-4.442187D-01	-1.185096D-01	-5.440714D-03
-4.788474D-03	2.549089D-01	3.444446D-01	-7.210026D-01
1.358616D-02	1.038163D-01	-1.682954D-02	2.045674D+00
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
1.016629D-03	-1.371003D-01	4.995655D-02	-3.415014D-02
-1.162157D-04	-1.716145D-01	1.709574D-02	-1.749864D-02
-9.679036D-03	-8.571013D-02	1.086249D-01	-1.457376D+00

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	-0.740D-05	0.522D-02	0.104D-03	0.157D-01	-0.113D-02	0.547D-01
CTR	0.212D-05	0.150D-02	0.891D-04	0.134D-01	0.209D-02	0.435D-01
CHF	0.137D-05	0.964D-03	0.902D-05	0.136D-02	-0.256D-03	0.585D-02
CHR	0.143D-05	0.101D-02	0.493D-05	0.742D-03	0.667D-04	0.335D-02
ALF	0.313D-03	0.221D+00	0.754D-03	0.114D+00	-0.632D-01	0.687D+00
AIR	0.550D-03	0.388D+00	0.666D-03	0.100D+00	-0.685D-01	0.608D+00
VFR	-0.540D-01	0.381D+02	0.181D+00	0.273D+02	-0.210D+01	0.927D+02
VRR	-0.248D-01	0.175D+02	0.154D+00	0.231D+02	0.367D+01	0.724D+02
LF			0.346D+02	0.520D+04		
DF			0.652D+01	0.982D+03		
MF			0.162D+03	0.244D+05		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.231D-05	0.348D-03	0.158D-03	0.298D-04	0.468D-02
CYR	0.161D-05	0.243D-03	0.646D-04	0.673D-04	0.265D-02
BIF	0.710D-04	0.107D-01	0.504D-01	0.894D-02	0.942D+00
BIR	0.258D-03	0.388D-01	0.790D-01	0.347D-03	0.993D+00
YF	-0.799D+02	0.120D+05			
LF	0.216D+02	0.325D+04			
NF	-0.289D+00	0.435D+02			
CTF					-0.608D-02
CTR					0.698D-02

FORCE = 0.241446D+07

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X	BICF	BICR	OMEGAF	OMEGAR
Z	0.0	0.0	0.0	0.0
M	0.0	0.0	0.0	0.0
Y	0.0	0.0	0.0	0.0
L	0.0	0.0	0.0	0.0
N	0.0	0.0	0.0	0.0
CTF	0.0	0.0	0.0	0.0
CTR	0.0	0.0	0.0	0.0
CHF	0.0	0.0	0.0	0.0
CHR	0.0	0.0	0.0	0.0
AIF	0.0	0.0	0.0	0.0
AIR	0.0	0.0	0.0	0.0
VFR	0.0	0.0	0.0	0.0
VRR	0.0	0.0	0.0	0.0
QF	0.0	0.0	0.0	0.0
QR	0.0	0.0	0.0	0.0
QFU	QFDELB	QFDELTAC		
QFV	QFDELS	QFBETA		
QFW	QFDELR	QFALPHA		
-0.517D-02	0.580D+00	0.120D+01		
-0.256D-02	-0.773D-02	-0.385D+00		
-0.752D-02	0.102D-02	-0.113D+01		
QRU	QRDELB	QRDELTAC		
QRV	QRDELS	QRBETA		
QRW	QRDELR	QRALPHA		
-0.199D-02	-0.720D+00	0.124D+01		
-0.250D-02	-0.288D-01	-0.376D+00		
0.358D-01	0.102D+00	0.539D+01		

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CASE 24

V	RC	GM	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
9.50000D+01	0.0	1.75000D+04	2.37800D-03	2.471464D+03
4.400000D+01	-1.057964D+01	-1.30282D+01	1.507301D+00	1.094233D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.05000D+02	3.809958D+01	3.00000D+01	-3.121724D+01	1.797121D+03
7.05000D+02	0.0	2.038944D+01	0.0	7.574539D+03
THEOF	AICF	B1TF	B1CF	DFW
THEOR	AICR	B1TR	B1CR	FFW
1.698310D+01	-1.420710D+00	-6.00000D-01	-6.00000D-01	1.250086D+03
1.709322D+01	-8.306096D+00	-6.00000D-01	-6.00000D-01	-2.373362D+03
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.703816D+01	-2.089297D+00	2.284303D+00	-2.146260D+00	7.781518D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.117697D+04	9.579164D+02	-7.043902D+02	3.160786D+03	-1.765755D+03
7.761958D+03	5.960649D+02	-8.122287D+02	2.201049D+03	-3.574912D+03
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
2.131099D+04	-2.562535D+03	-6.197580D+03	-4.978088D+03	1.071248D+03
1.966729D+04	7.930805D+02	-1.370540D+04	2.360582D+04	9.886231D+02
XR	L/DE	SHPTOT	WFF	NMLB
4.713779D+03	6.505610D+00	2.159871D+03	2.160871D+03	4.396376D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	7.888550D-02	5.924986D-03	7.738137D-01	-8.019585D-02
5.841923D-02	5.535897D-02	5.467996D-03	7.606583D-01	-7.796910D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
2.172055D-01	7.885748D+00	9.353539D-01	9.185854D-01	4.411703D+00
2.195957D-01	5.446011D+00	1.366485D-01		3.182578D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
5.881639D+00	2.029217D-01	-1.748053D+00	1.003192D+01	8.880363D+00
9.840706D-02	-6.825378D+00	2.825211D+00	3.077103D+00	6.913494D+00
CAPVF	ALPHAF	BETAFW	ATIPF	BPIPF
CAPVR	ALPHAR	BETARN	ATIPR	BPIPR
1.606729D+02	-1.762598D+01	3.114311D+01	3.458020D+02	5.885138D+00
1.625427D+02	-1.773840D+01	3.076700D+01	3.425188D+02	6.826088D+00

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMTF	CTFP	A90F
RMTB	CTRP	A90RA
4.916172D-01	7.757695D-02	1.459721D+00
4.932604D-01	5.370071D-02	1.310789D+00

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPP	RHPF	SHPTOT	NMLB
DELHPR	RHPR	NFF	RP
2.921574D+01	1.100463D+03	2.209310D+03	4.298039D-02
2.022387D+01	1.008847D+03	2.210310D+03	7.521568D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

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V	RC	GH	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
1.400000D+02	0.0	1.750000D+04	2.378000D-03	2.357938D+03
4.400000D+01	-7.445838D+00	-8.492979D+00	-4.697140D+00	1.097062D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	3.809958D+01	-1.000000D+01	1.147389D+01	1.654420D+03
7.050000D+02	0.0	-1.465883D+01	0.0	7.459483D+03
THEOF	AICF	B1TF	BICF	DFW
THEOR	AICR	B1TR	BICR	LFFW
1.967979D+01	-1.897388D+00	2.800000D+00	2.800000D+00	3.132065D+03
1.868326D+01	4.280720D+00	4.000000D+00	4.000000D+00	-1.536655D+03
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.918152D+01	-2.193635D+00	-2.056774D+00	5.912061D-01	9.443041D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.118549D+04	8.939566D+02	2.319414D+01	2.690377D+03	8.804511D+02
7.628651D+03	4.297404D+02	5.219865D+02	1.650537D+03	2.883291D+03
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
2.990269D+04	-1.929578D+03	4.913560D+03	9.147160D+03	1.503130D+03
2.231016D+04	2.906522D+03	-1.371895D+04	-1.718745D+04	1.121473D+03
XR	L/DE	SHPTOT	NFF	NMLB
3.891992D+03	7.155734D+00	2.724603D+03	2.725603D+03	5.136478D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	7.863159D-02	8.313693D-03	8.385157D-01	-1.040625D-01
5.841923D-02	5.437699D-02	6.202779D-03	8.388053D-01	-9.677550D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
3.212713D-01	5.413641D+00	1.190884D+00	9.470908D-01	4.348967D+00
3.251081D-01	3.674795D+00	1.695700D-02		3.092869D+00
ALF	B1F	BETAOF	B180F	A270F
ALR	B1R	BETAOR	B180R	A270R
4.558287D+00	6.202357D-01	-8.626931D-01	8.316992D+00	1.233340D+01
1.805514D+00	5.088453D+00	6.850076D-01	4.404490D+00	9.552138D+00
CAPVF	ALPHAF	BETAFW	AT1PF	BPTPF
CAPVR	ALPHAR	BETARW	AT1PR	BPTPR
2.364695D+02	-1.669959D+01	3.496420D+02	3.476124D+02	4.600290D+00
2.381179D+02	-1.572928D+01	3.497656D+02	3.473597D+02	5.399281D+00

CASE 17

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTF	CTFP	A90F	
RMTR	CTRP	A90RA	
4.253745D-01	7.777769D-02	5.883734D-01	
4.203233D-01	5.288501D-02	3.773239D-01	

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SNPTOT	NMLB
DELHPR	RHPR	WFF	RP
7.678371D+01	1.579914D+03	2.853596D+03	4.904372D-02
5.220915D+01	1.173682D+03	2.854596D+03	8.582651D+02

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
5.439174D+02	1.499900D+04	1.139350D+05	1.079530D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-6.755656D-02	-1.390441D-01	9.028067D-03	5.066828D-01
7.038196D-03	1.794107D-01	6.036997D-02	1.625711D+00
5.174695D-02	-1.852106D-01	-1.468210D-02	1.195272D+01
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
4.855639D-02	-1.555711D+00	4.945152D-01	-1.129987D+01
-2.420396D-02	-5.713777D+00	-9.049025D-01	-5.590729D+00
-1.043833D+00	4.601297D-01	1.955240D-01	-2.411088D+02
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MM	MR	MDELR	MALPHA
-1.083192D-03	2.642090D-01	5.293404D-01	-5.144193D-02
-1.699503D-03	-1.429521D+00	-1.180966D-03	-3.923581D-01
-4.520554D-03	-3.174784D-01	1.415963D-01	-1.044176D+00
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
3.502859D-02	3.288859D-01	2.266335D-01	-2.768909D-01
-2.315192D-01	-8.416330D-01	9.439129D-01	-5.347724D+01
-6.292447D-02	-2.283108D-01	3.343981D-01	-1.453455D+01
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
3.952106D-03	-2.480689D-01	1.440421D-02	-1.393339D-01
-1.324608D-02	-1.400384D-01	3.566620D-01	-3.059632D+00
-1.618669D-02	-2.479612D-02	-4.099068D-02	-3.738866D+00
MU	MP	MDELB	MDELTAC
NV	NQ	MDELS	NBETA
NW	NR	MDELR	NALPHA
-3.184445D-04	2.221157D-02	6.453787D-02	5.532066D-02
5.147613D-03	-1.571411D-01	1.709505D-02	1.189017D+00
5.054530D-03	-6.724413D-02	1.321861D-01	1.167516D+00

LONGITUDINAL

	U	W	W	ALPHA	Q	THETAC
CTF	-0.821D-05	-0.579D-02	0.110D-03	0.254D-01	-0.110D-02	0.616D-01
CTR	-0.231D-05	-0.163D-02	0.966D-04	0.226D-01	0.226D-02	0.535D-01
CNR	0.164D-05	0.116D-02	0.102D-04	0.237D-02	-0.113D-03	0.752D-02
CHR	0.140D-05	0.987D-03	0.486D-05	0.113D-02	0.130D-03	0.376D-02
ALF	0.405D-03	0.286D+00	0.119D-02	0.274D+00	-0.786D-01	0.107D+01
ALR	0.504D-03	0.355D+00	0.105D-02	0.243D+00	-0.598D-01	0.975D+00
VFR	-0.313D-01	-0.221D+02	0.131D+00	0.302D+02	-0.137D+01	0.716D+02
VVR	0.174D-01	-0.123D+02	0.114D+00	0.263D+02	0.268D+01	0.618D+02
LF			0.683D+02	0.158D+05		
NF			0.409D+01	0.946D+03		
MF			0.154D+03	0.357D+05		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.297D-05	-0.686D-03	-0.594D-04	-0.250D-04	0.504D-02
CYR	0.310D-05	0.717D-03	0.178D-04	-0.132D-03	0.292D-02
BIF	-0.133D-03	-0.307D-01	-0.562D-01	-0.120D-01	0.992D+00
BIR	0.353D-03	0.817D-01	0.718D-01	-0.895D-03	0.106D+01
YF	-0.122D+03	-0.281D+05			
LF	-0.853D+02	-0.197D+05			
NF	0.746D+03	0.173D+06			
CTF					-0.514D-02
CTR					0.459D-02

FORCE = 0.241446D+07

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CASE 17

X	BICF	BICR	OMEGAF	OMEGAR
Z	0.0	0.0	0.0	0.0
M	0.0	0.0	0.0	0.0
Y	0.0	0.0	0.0	0.0
L	0.0	0.0	0.0	0.0
N	0.0	0.0	0.0	0.0
CTF	0.0	0.0	0.0	0.0
CTR	0.0	0.0	0.0	0.0
CHF	0.0	0.0	0.0	0.0
CHR	0.0	0.0	0.0	0.0
AIF	0.0	0.0	0.0	0.0
AIR	0.0	0.0	0.0	0.0
VFR	0.0	0.0	0.0	0.0
VRR	0.0	0.0	0.0	0.0
QF	0.0	0.0	0.0	0.0
QR	0.0	0.0	0.0	0.0
QFU	QFDELB	QFP	QFDELB	QFDELTAC
QFV	QFDELS	QFQ	QFDELS	QFBETA
QFW	QFDELR	QFR	QFDELR	QFALPHA
-0.115D-01	-0.763D-01	-0.115D-01	0.157D+01	0.293D+01
0.191D-02	0.214D+00	0.191D-02	0.124D+00	0.440D+00
0.122D+00	-0.124D+01	0.122D+00	0.192D+00	0.283D+02
QRU	QRP	QRP	QRDELB	QRDELTAC
QRV	QRQ	QRQ	QRDELS	QRBETA
QRW	QRR	QRR	QRDELR	QRALPHA
-0.568D-02	-0.185D+01	-0.185D+01	-0.127D+01	0.221D+01
0.582D-02	0.379D+01	0.379D+01	0.812D-01	0.134D+01
0.902D-01	0.575D+00	0.575D+00	-0.203D+00	0.208D+02

V	RC	GN	RHO	XF	LW
FE	ALPHA	ALFF	THETA	LF	LW
1.400000D+02	0.0	1.750000D+04	2.378000D-03	2.085720D+03	
4.400000D+01	-6.043014D+00	-7.069602D+00	-4.641245D+00	1.090530D+04	
VTF	CGF	BETAF	PSI	XR	LW
VTR	CGL	PHI	GAMMA	LR	LW
7.050000D+02	3.809958D+01	-7.000000D+00	7.973316D+00	1.515834D+03	
7.050000D+02	0.0	-1.085804D+01	0.0	7.371264D+03	
THEOF	AICF	B1TF	BICF	DFW	
THEOR	AICR	B1TR	B1CR	LFFW	
1.913467D+01	-2.196070D+00	2.800000D+00	2.800000D+00	3.041133D+03	
1.790993D+01	1.987207D+00	4.000000D+00	4.000000D+00	-1.123884D+03	
THETAC	DELTAB	DELTAS	DELTAR	DELTAC	
1.852230D+01	-2.030718D+00	-1.362108D+00	3.496261D-02	8.932014D+00	
TF	HF	YF	MHF	LHF	
TR	HR	YR	MHR	LHR	
1.106712D+04	8.914619D+02	-1.217943D+02	2.674997D+03	4.550994D+02	
7.515804D+03	3.820802D+02	2.439307D+02	1.384122D+03	1.610774D+03	
QF	LFZ	YFY	LF	RHPF	
QR	DEX	MF	NF	RHPR	
2.778660D+04	-1.437794D+03	3.652758D+03	6.320924D+03	1.396759D+03	
2.012921D+04	2.905917D+03	-1.370301D+04	-1.008091D+04	1.011843D+03	
XR	L/DE	SHPTOT	WFF	NMLB	
3.430666D+03	7.278060D+00	2.508602D+03	2.509602D+03	5.578574D-02	
SIGOF	CTSF	CPSF	AMTF	LAMDAF	
SIGOR	CTSR	CPSR	AMTR	LAMDAR	
5.841923D-02	7.887219D-02	7.725366D-03	8.385964D-01	-9.686084D-02	
5.841923D-02	5.296093D-02	5.596422D-03	8.398026D-01	-8.986081D-02	
MUF	VF	DFFR	DFF	A0F	
MUR	VR	DFRF		A0R	
3.233104D-01	5.363235D+00	1.260084D+00	9.429538D-01	4.345165D+00	
3.268683D-01	3.624149D+00	8.448650D-03		2.930162D+00	
A1F	B1F	BETA0F	B180F	A270F	
A1R	B1R	BETA0R	B180R	A270R	
4.405851D+00	1.864711D-01	-7.243812D-01	8.166979D+00	1.213415D+01	
1.905098D+00	2.875496D+00	4.757835D-01	4.377266D+00	9.007874D+00	
CAPVF	ALPHAF	BETAFW	AT1FF	BPTPF	
CAPVR	ALPHAR	BETARW	AT1PR	BPTPR	
2.364598D+02	-1.543275D+01	3.527770D+02	3.488628D+02	4.409795D+00	
2.380567D+02	-1.453060D+01	3.528560D+02	3.488621D+02	3.449330D+00	

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PAGE 4

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMTF	CTFP	A90F
RMTR	CIRP	A90RA
4.244359D-01	7.731460D-02	5.505861D-01
4.221586D-01	5.225957D-02	2.951627D-01

3

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
7.632654D+01	1.473086D+03	2.636520D+03	5.308016D-02
5.159171D+01	1.063434D+03	2.637520D+03	9.289028D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

PAGE 3

V	RC	GM	RH0	XF LW
FE	ALPHA	ALFF	THETA	LF LW
1.400000D+02	0.0	1.750000D+04	2.378000D-03	1.927345D+03
4.400000D+01	-5.152099D+00	-6.170955D+00	-4.637518D+00	1.083628D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	3.809958D+01	-4.000000D+00	4.533598D+00	1.430126D+03
7.050000D+02	0.0	-6.432975D+00	0.0	7.334797D+03
THEOF	AICF	BIF	BICF	DFW
THEOR	AICR	BIR	BICR	FFW
1.867992D+01	-2.131574D+00	2.800000D+00	2.800000D+00	2.999346D+03
1.745903D+01	-2.956279D-01	4.000000D+00	4.000000D+00	-8.183676D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.806947D+01	-2.049380D+00	-5.909231D-01	-4.964342D-01	8.580987D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.097192D+04	8.698829D+02	-1.919619D+02	2.620575D+03	1.095903D+02
7.464495D+03	3.547253D+02	-2.530911D+01	1.210549D+03	3.089170D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
2.580044D+04	-1.084402D+03	2.127634D+03	2.902167D+03	1.296920D+03
1.906438D+04	2.913738D+03	-1.284974D+04	-3.266759D+03	9.583166D+02
XR	L/DE	SHPTOT	WFF	NMLB
3.158299D+03	7.542723D+00	2.355237D+03	2.356237D+03	5.941677D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LANDAR
5.841923D-02	7.742471D-02	7.173164D-03	8.385162D-01	-9.220040D-02
5.841923D-02	5.272350D-02	5.300373D-03	8.395667D-01	-8.537886D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DERF		AOR
3.245388D-01	5.325463D+00	1.301415D+00	9.446079D-01	4.293098D+00
3.279136D-01	3.606872D+00	2.786122D-03		2.870915D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
4.260614D+00	-1.283040D-01	-6.488722D-01	7.983309D+00	1.181092D+01
1.925287D+00	6.400109D-01	4.169990D-01	4.358503D+00	8.702209D+00
CAPVF	ALPHAF	BETAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
2.364541D+02	-1.461827D+01	3.558826D+02	3.496085D+02	4.262546D+00
2.380035D+02	-1.375375D+01	3.559251D+02	3.497732D+02	2.028878D+00

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CASE 26

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTF	CTFP	A90F	
RMTF	CTRP	A90RA	
4.239572D-01	7.682527D-02	5.582205D-01	
4.235105D-01	5.200104D-02	2.657118D-01	

3

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELMPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
7.584347D+01	1.372764D+03	2.482417D+03	5.637394D-02
5.133647D+01	1.009653D+03	2.483417D+03	9.865440D+02

STABILITY NOT CALCULATED FOR THIS CASE. SKIPPING TO NEXT CASE

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PAGE 3

V	RC	GM	RHO	XF	LW
FE	ALPHA	ALFF	THETA	LF	LW
1.400000D+02	0.0	1.750000D+04	2.378000D-03	1.832983D+03	
4.400000D+01	-4.654071D+00	-5.685397D+00	-4.653928D+00	1.083607D+04	
VTF	CGF	BETAF	PSI	XR	LW
VTR	CGL	PHI	GAMMA	LR	LW
7.050000D+02	3.809958D+01	0.0	7.744074D-02	1.398740D+03	
7.050000D+02	0.0	-9.739055D-01	0.0	7.418053D+03	
THEOF	AICF	B1IF	BICF	DFW	
THEOR	AICR	B1IR	BICR	LFFW	
1.843516D+01	-1.626318D+00	2.800000D+00	2.800000D+00	3.003843D+03	
1.731866D+01	-1.665459D+00	4.000000D+00	4.000000D+00	-7.949971D+02	
THETAC	DELTA	DELTA	DELTA	DELTA	
1.787691D+01	-2.131067D+00	2.546934D-02	-6.963381D-01	8.431714D+00	
TF	HF	YF	MHF	LHF	
TR	HR	YR	MHR	LHR	
1.095533D+04	8.724102D+02	-1.958261D+02	2.666822D+03	1.221057D+02	
7.540761D+03	3.477252D+02	-1.508957D+02	1.125288D+03	-2.695063D+02	
QF	LFZ	YFY	LF	RHPF	
QR	DFX	MF	NF	RHPR	
2.487235D+04	-1.036106D+03	3.473176D+02	9.796502D+02	1.250268D+03	
1.883677D+04	2.929433D+03	-1.105815D+04	-2.593265D+02	9.468749D+02	
XR	L/DE	SHPTOT	WFF	NMLB	
3.015677D+03	7.518445D+00	2.297143D+03	2.298143D+03	6.091876D-02	
SIGOF	CTSF	CPSF	AMTF	LAMDAF	
SIGOR	CTSR	CPSR	AMTR	LAMDAR	
5.841923D-02	7.762523D-02	6.915132D-03	8.391549D-01	-8.956195D-02	
5.841923D-02	5.333631D-02	5.237090D-03	8.390249D-01	-8.292821D-02	
MUF	VF	DFFR	DF	AOF	
MUR	VR	DFRF		AOR	
3.252104D-01	5.321604D+00	1.326201D+00	9.541740D-01	4.286222D+00	
3.284782D-01	3.643105D+00	1.530955D-38		2.892154D+00	
AIF	BIF	BETAOF	B180F	A270F	
AIR	BIR	BETAOR	B180R	A270R	
4.334131D+00	1.982579D-01	-7.287466D-01	8.052114D+00	1.174656D+01	
1.827388D+00	-4.375895D-01	5.386475D-01	4.285781D+00	8.662170D+00	
CAPVF	ALPHAF	BETAFW	AT1FF	BPT1F	
CAPVR	ALPHAR	BETARW	AT1PR	BPT1R	
2.364516D+02	-1.415407D+01	9.609768D-18	3.501801D+02	4.338663D+00	
2.379776D+02	-1.331845D+01	9.514165D-18	3.501733D+02	1.879051D+00	

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PAGE 4

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMIF	CTFP	A90F	
RMIR	CTRP	A90RA	
4.231903D-01	7.682380D-02	5.233886D-01	
4.238069D-01	5.259129D-02	2.666361D-01	

3

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELMPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	NFF	RP
7.584201D+01	1.326110D+03	2.424904D+03	5.771045D-02
5.191918D+01	9.987941D+02	2.425904D+03	1.009933D+03

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

PAGE 3

V	RC	GM	RHO	XF LM
FE	ALPHA	ALFF	THETA	LF LM
1.400000D+02	0.0	1.750000D+04	2.378000D-03	1.863495D+03
4.400000D+01	-4.874187D+00	-5.898397D+00	-4.545983D+00	1.086428D+04
VTF	CGF	BETAF	PSI	XR LM
VTR	CGL	PHI	GAMMA	LR LM
7.050000D+02	3.809958D+01	4.000000D+00	-4.333849D+00	1.430874D+03
7.050000D+02	0.0	4.209267D+00	0.0	7.458836D+03
THEOF	ALCF	B1TF	BICF	DFW
THEOR	ALCR	B1TR	BICR	LFFW
1.849458D+01	-1.025081D+00	2.800000D+00	2.800000D+00	2.986295D+03
1.748791D+01	-3.001904D+00	4.000000D+00	4.000000D+00	-9.082477D+02
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.799125D+01	-2.217003D+00	6.670886D-01	-8.871706D-01	8.520348D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.098731D+04	8.855895D+02	-1.801262D+02	2.764061D+03	1.759921D+02
7.586803D+03	3.493569D+02	-2.728782D+02	1.089484D+03	-8.576793D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	NF	NF	RHPR
2.512509D+04	-1.158703D+03	-1.366153D+03	-9.314092D+02	1.262972D+03
1.929986D+04	2.898323D+03	-1.075204D+04	1.897507D+03	9.701532D+02
XR	L/DE	SHPTOT	WFF	NMLB
3.088976D+03	7.485002D+00	2.333126D+03	2.334126D+03	5.997963D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	7.787545D-02	6.985601D-03	8.395589D-01	-9.064462D-02
5.841923D-02	5.358438D-02	5.365841D-03	8.378664D-01	-8.398026D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
3.249445D-01	5.336197D+00	1.312841D+00	9.418139D-01	4.306341D+00
3.282506D-01	3.665087D+00	2.792102D-03		2.920744D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
4.460408D+00	6.073070D-01	-8.386321D-01	8.195679D+00	1.181862D+01
1.665853D+00	-1.514842D+00	7.260381D-01	4.152428D+00	8.720180D+00
CAPVF	ALPHAF	BETAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
2.364541D+02	-1.434109D+01	4.113946D+00	3.500862D+02	4.501562D+00
2.379884D+02	-1.349596D+01	4.072440D+00	3.497917D+02	2.251624D+00

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CASE 28

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTR	CTFP	A90F	
	CTRP	A90RA	
4.229162D-01	7.702377D-02	5.283074D-01	
4.245998D-01	5.288042D-02	3.060299D-01	

3

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
7.603943D+01	1.339012D+03	2.461370D+03	5.685580D-02
5.220463D+01	1.022358D+03	2.462370D+03	9.949765D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

V	RC	OM	RHO	XF LM
FE	ALPHA	ALFF	THETA	LF LM
1.400000D+02	0.0	1.750000D+04	2.378000D-03	1.974016D+03
4.400000D+01	-5.540554D+00	-6.567396D+00	-4.490243D+00	1.092320D+04
VTF	CGF	BETAF	PSI	XR LM
VTR	CGL	PHI	GAMMA	LR LM
7.050000D+02	3.809958D+01	7.000000D+00	-7.684065D+00	1.488173D+03
7.050000D+02	0.0	8.159536D+00	0.0	7.437950D+03
THEOF	AICF	B1TF	B1CF	DFM
THEOR	AICR	B1TR	B1CR	LFEM
1.875094D+01	-8.805820D-01	2.800000D+00	2.800000D+00	2.988894D+03
1.789489D+01	-5.220458D+00	4.000000D+00	4.000000D+00	-1.073965D+03
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.832292D+01	-2.319209D+00	1.438891D+00	-1.356279D+00	8.777457D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.106296D+04	9.076685D+02	-2.329750D+02	2.876001D+03	6.412053D+00
7.576660D+03	3.632862D+02	-5.283503D+02	1.105030D+03	-2.054004D+03
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
2.620233D+04	-1.356753D+03	-2.765278D+03	-4.145136D+03	1.317123D+03
2.037266D+04	2.863276D+03	-1.235568D+04	7.306110D+03	1.024080D+03
XR	L/DE	SHPTOT	WFF	NMLB
3.284800D+03	7.311231D+00	2.441203D+03	2.442203D+03	5.732529D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	7.848559D-02	7.284901D-03	8.394295D-01	-9.405928D-02
5.841923D-02	5.391984D-02	5.664108D-03	8.348988D-01	-8.720595D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF	DFR	AOR
3.240746D-01	5.373990D+00	1.276695D+00	9.375823D-01	4.363015D+00
3.275099D-01	3.657522D+00	8.475555D-03		2.992479D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B18OR	A27OR
4.636523D+00	5.972278D-01	-9.656752D-01	8.421851D+00	1.199153D+01
1.366046D+00	-3.533955D+00	1.089615D+00	3.922874D+00	8.865805D+00
CAPVF	ALPHA F	BETAFW	ATIPF	BPTPF
CAPVR	ALPHA R	BETARW	ATIPR	BPTPR
2.364596D+02	-1.493417D+01	7.212221D+00	3.495960D+02	4.674829D+00
2.380246D+02	-1.405937D+01	7.136176D+00	3.488255D+02	3.788789D+00

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CASE 29

TP
0.0

MFF
NFF
0.0
0.0

ZFF
YFF
0.0
0.0

XFF
LFF
0.0
0.0

RMTR
4.234125D-01 7.744150D-02 5.675985D-01
4.258137D-01 5.273235D-02 4.057848D-01

A90F
A90RA

CTFP
CTRP

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF RHPF SHPTOT NMLB
DELHPR RHPR WFF RP

7.645182D+01 1.393574D+03 2.569713D+03 5.445960D-02
5.205844D+01 1.076139D+03 2.570713D+03 9.530429D+02
STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

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CASE 18

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V	RC	GM	RH0	XF LW
FE	ALPHA	ALFF	THETA	LF LW
1.400000D+02	0.0	1.750000D+04	2.378000D-03	2.164202D+03
4.400000D+01	-6.665821D+00	-7.697394D+00	-4.361075D+00	1.094000D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	3.809958D+01	1.000000D+01	-1.114332D+01	1.585293D+03
7.050000D+02	0.0	1.257934D+01	0.0	7.407353D+02
THEOF	AICF	BITF	BICF	DFW
THEOR	AICR	BITR	BICR	LEFW
1.911002D+01	-1.254140D+00	2.800000D+00	2.800000D+00	2.976144D+03
1.855505D+01	-7.816204D+00	4.000000D+00	4.000000D+00	-1.301255D+03
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.883254D+01	-2.539146D+00	2.178773D+00	-2.002595D+00	9.172510D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.111385D+04	9.218121D+02	-3.930140D+02	2.971594D+03	-4.927903D+02
7.565258D+03	3.858947D+02	-8.341021D+02	1.170508D+03	-3.481808D+03
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
2.769953D+04	-1.637925D+03	-4.243028D+03	-7.179036D+03	1.392383D+03
2.209206D+04	2.804978D+03	-1.369180D+04	1.543659D+04	1.110510D+03
XR	L/DE	SHPTOT	WFF	NMLB
3.621321D+03	7.192303D+00	2.602893D+03	2.603893D+03	5.376566D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	7.870369D-02	7.701159D-03	8.387692D-01	-9.969238D-02
5.841923D-02	5.402740D-02	6.142143D-03	8.299869D-01	-9.256945D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF	DF	AOR
3.225334D-01	5.375514D+00	1.226214D+00	9.382677D-01	4.403345D+00
3.261840D-01	3.643733D+00	1.707516D-02		3.084930D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
4.895740D+00	7.937261D-02	-1.167107D+00	8.720287D+00	1.212298D+01
8.663014D-01	-5.909846D+00	1.667928D+00	3.510565D+00	9.106567D+00
CAPVF	ALPHAF	BETAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
2.364686D+02	-1.593145D+01	1.033406D+01	3.487299D+02	4.896384D+00
2.380719D+02	-1.500005D+01	1.021715D+01	3.472005D+02	5.973003D+00

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CASE 18

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMTF	CTFP	A90F
RMTR	CTRP	A90RA
4.248722D-01	7.756062D-02	6.246956D-01
4.269613D-01	5.251543D-02	5.439314D-01

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
7.656941D+01	1.468952D+03	2.731306D+03	5.123876D-02
5.184430D+01	1.162354D+03	2.732306D+03	8.966784D+02

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
5.439174D+02	1.499900D+04	1.139350D+05	1.079530D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
-6.665678D-02	-4.016186D-01	-4.473167D-02	5.662299D-01
-1.647237D-03	3.479385D-01	-7.540977D-02	-3.811015D-01
5.901905D-02	6.609537D-03	-2.253786D-02	1.365453D+01
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
5.051342D-02	8.813195D-01	5.371142D-01	-1.135497D+01
1.656323D-02	-5.054819D+00	9.318747D-01	3.2038D+00
-1.042126D+00	-1.285329D+00	1.019331D-01	-2.411043D+02
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-1.314305D-03	4.080409D-01	5.381135D-01	-5.708131D-02
6.205172D-03	-1.294537D+00	-1.663050D-02	1.435616D+00
-4.734167D-03	-4.550828D-01	-1.443770D-01	-1.095288D+00
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
-2.100591D-02	-3.382573D-01	-5.127282D-01	1.929020D-01
-2.504497D-01	1.102163D+00	9.706732D-01	-5.794356D+01
5.538216D-02	4.686928D-01	4.014450D-01	1.281311D+01
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
-2.129816D-03	-2.690247D-01	-2.166210D-01	7.324070D-02
-1.557885D-02	5.089991D-01	3.641182D-01	-3.604293D+00
1.429861D-02	2.494186D-01	-1.309781D-02	3.308099D+00
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-3.491970D-04	-1.306031D-01	1.059676D-01	-5.397329D-02
7.676891D-03	-2.938227D-01	1.528260D-02	1.776110D+00
-7.751831D-03	-1.530664D-01	1.106555D-01	-1.793449D+00

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	-0.755D-05	-0.532D-02	0.110D-03	0.253D-01	0.122D-02	0.616D-01
CTR	-0.256D-05	-0.180D-02	0.963D-04	0.223D-01	0.253D-02	0.531D-01
CHF	0.171D-05	0.121D-02	0.101D-04	0.233D-02	0.117D-03	0.739D-02
CHR	0.136D-05	0.962D-03	0.628D-05	0.145D-02	0.185D-03	0.464D-02
ALF	0.470D-03	0.331D+00	0.120D-02	0.277D+00	0.949D-01	0.107D+01
AIR	0.458D-03	0.323D+00	0.105D-02	0.244D+00	0.430D-01	0.974D+00
VFR	-0.306D-01	-0.216D+02	0.130D+00	0.301D+02	0.151D+01	0.715D+02
VRR	-0.176D-01	-0.124D+02	0.114D+00	0.263D+02	0.302D+01	0.612D+02
LF			0.700D+02	0.162D+05		
DF			0.480D+01	0.111D+04		
MF			0.150D+03	0.347D+05		

LATERAL-DIRECTIONAL

	V	BETA	P	R	ALC
CYF	-0.276D-05	-0.638D-03	0.575D-05	0.433D-04	0.479D-02
CYR	0.217D-05	0.501D-03	0.670D-04	0.753D-05	0.302D-02
BIF	-0.269D-03	-0.621D-01	-0.698D-01	-0.164D-01	0.106D+01
BIR	0.381D-03	0.880D-01	0.613D-01	0.153D-02	0.101D+01
YF	-0.114D+03	-0.263D+05			
LF	-0.760D+02	-0.175D+05			
NF	0.573D+03	0.132D+06			
CTF					0.408D-02
CTR					-0.515D-02

FORCE = 0.241446D+07

CASE 18

X	BICF	BICR	OMEGAF	OMEGAR
Z	0.0	0.0	0.0	0.0
M	0.0	0.0	0.0	0.0
Y	0.0	0.0	0.0	0.0
L	0.0	0.0	0.0	0.0
N	0.0	0.0	0.0	0.0
CTF	0.0	0.0	0.0	0.0
CTR	0.0	0.0	0.0	0.0
CHF	0.0	0.0	0.0	0.0
CHR	0.0	0.0	0.0	0.0
AIF	0.0	0.0	0.0	0.0
AIR	0.0	0.0	0.0	0.0
VFR	0.0	0.0	0.0	0.0
QF	0.0	0.0	0.0	0.0
QR	0.0	0.0	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELR	QFALPHA
	-0.124D-01	-0.100D+01	0.142D+01	0.265D+01
	0.335D-02	0.732D+00	-0.129D+00	0.775D+00
	0.976D-01	-0.126D+01	-0.195D+00	0.226D+02
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELR	QRALPHA
	-0.587D-02	0.264D+01	-0.129D+01	0.221D+01
	-0.123D-01	0.343D+01	-0.399D-01	-0.284D+01
	0.918D-01	0.166D+01	0.148D+00	0.212D+02

CATALOG OF TRIM & STABILITY DERIVATIVE DATA

A-97 TRIM ANALYSIS (CH-46E)

GW = 17,500 lb CG = 40 in. fwd

<u>ALTITUDE</u>	<u>AIRSPEED</u>	<u>CLIMB RATE</u>	<u>SIDESLIP</u>	<u>DERIVATIVES</u>
0 ft	-45 kt swd	0 ft/min	-90 deg	
	-30			X
	-15			
	15		90	
	30			X
	45			

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V	RC	GW	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
4.500000D+01	0.0	1.750000D+04	2.378000D-03	1.654987D+03
4.400000D+01	-9.000000D+01	-9.000000D+01	6.588310D+00	1.098551D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	3.809958D+01	-9.000000D+01	9.000000D+01	1.518407D+03
7.050000D+02	0.0	-1.033845D+01	0.0	8.398555D+03
THEOF	AICF	BITF	BICF	DFW
THEOR	AICR	BITR	BICR	LEFW
1.475452D+01	7.243378D-01	-2.500000D+00	-2.500000D+00	2.430165D+03
1.414762D+01	2.253441D+00	-2.500000D+00	-2.500000D+00	-2.966634D-12
THEIAC	DELTAB	DELIAS	DELTAR	DELIAC
1.445107D+01	4.748826D-01	-5.094669D-01	6.297957D-01	5.776026D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.110004D+04	4.578735D+02	5.262540D+02	1.206506D+03	1.580122D+03
8.525096D+03	4.049929D+02	6.602731D+01	1.857980D+03	3.570094D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.482647D+04	-2.430165D+03	2.664442D+03	-2.397998D+03	7.452879D+02
1.308732D+04	1.770816D-29	9.720660D+03	-1.065777D+04	6.578651D+02
XR	L/DE	SHPTOT	MFF	NMLB
1.953428D+04	-2.021595D+00	1.503153D+03	1.504153D+03	2.991717D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	7.869612D-02	4.122129D-03	6.958068D-01	-4.298571D-02
5.841923D-02	6.044507D-02	3.638600D-03	6.977848D-01	-4.176998D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
1.061076D-01	1.585565D+01	2.336527D-01	7.785613D-01	4.263676D+00
1.060858D-01	1.222286D+01	8.277028D-02		3.234730D+00
ALF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
2.506396D+00	-2.035565D+00	1.697168D+00	6.713463D+00	5.658957D+00
-6.465065D-01	3.004507D+00	3.826371D+00	2.535472D+00	4.565384D+00
CAPVF	ALPHAF	BETAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
7.618777D+01	-1.092938D+01	2.682781D+02	2.630064D+02	3.228861D+00
7.674786D+01	-1.296787D+01	2.687284D+02	2.623535D+02	3.073277D+00

PAGE 4

CASE 30

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMTF	CTFP	A90F
RMTR	CTRP	A90RA
5.63233D-01	7.788327D-02	2.452782D+00
5.609651D-01	5.954269D-02	1.791462D+00

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
3.526214D+00	7.488141D+02	1.509375D+03	2.979392D-02
2.695832D+00	6.605609D+02	1.510375D+03	5.213937D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

CASE 19

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V	RC	GM	RHO	XF LM
FE	ALPHA	ALFF	THETA	LF LM
3.000000D+01	0.0	1.750000D+04	2.378000D-03	8.192654D+02
4.400000D+01	-9.000000D+01	-9.000000D+01	6.249949D+00	1.062504D+04
VTF	CGF	BETAF	PSI	XR LM
VTR	CGL	PHI	GAMMA	LR LM
7.050000D+02	3.809958D+01	-9.000000D+01	9.000000D+01	1.156385D+03
7.050000D+02	0.0	-5.069396D+00	0.0	7.872313D+03
THEOF	AICF	B1TF	B1CF	DFW
THEOR	AICR	B1TR	B1CR	LFFW
1.445282D+01	-1.711200D-01	-2.500000D+00	-2.500000D+00	1.180928D+03
1.331926D+01	8.550133D-01	-2.500000D+00	-2.500000D+00	-2.677298D-12
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.388604D+01	8.869770D-01	-3.439843D-01	1.518861D-01	5.338015D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.064687D+04	4.548316D+02	2.009974D+02	1.339734D+03	6.000210D+02
7.948316D+03	3.671670D+02	-4.176962D+01	1.747370D+03	-1.209590D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.412121D+04	-1.180928D+03	1.294774D+03	-1.165296D+03	7.098360D+02
1.106342D+04	6.884159D-30	4.723711D+03	-5.179094D+03	5.561293D+02
XR	L/DE	SHPTOT	MFF	NMLB
1.850974D+04	-4.752498D+00	1.365965D+03	1.366965D+03	2.194642D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	7.563910D-02	3.926047D-03	6.729275D-01	-3.891851D-02
5.841923D-02	5.621312D-02	3.075907D-03	6.762351D-01	-3.681409D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
7.159645D-02	2.135970D+01	2.513799D-01	9.084150D-01	4.076998D+00
7.159296D-02	1.613326D+01	1.024263D-01		2.946966D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
9.423234D-01	-2.189816D+00	3.108048D+00	4.994536D+00	4.792763D+00
1.657082D-01	2.840243D+00	2.757601D+00	3.089326D+00	3.604916D+00
CAPVF	ALPHA	BETAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
5.083896D+01	-6.855358D+00	2.691614D+02	2.614423D+02	2.383960D+00
5.141797D+01	-1.100142D+01	2.693807D+02	2.631657D+02	2.845073D+00

PAGE 4

CASE 19

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMTF	CTFP	A90F
RMTR	CTRP	A90RA
5.853069D-01	7.532765D-02	2.790560D+00
5.826810D-01	5.581183D-02	1.843214D+00

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
1.291479D+00	7.111275D+02	1.368214D+03	2.191039D-02
9.568833D-01	5.570862D+02	1.369214D+03	3.834318D+02

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
5.439174D+02	1.499900D+04	1.139350D+05	1.079530D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
4.857555D-03	-2.082334D-01	1.059651D-01	7.708967D-01
-5.349146D-02	1.313335D+00	9.219185D-02	-1.702686D-01
5.654372D-02	-1.669955D-01	4.529544D-03	1.799843D-01
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
-4.986996D-02	-4.836311D-01	7.208162D-02	-7.502019D+00
4.555540D-01	-1.467413D+00	-9.241031D-01	1.450073D+00
-6.043769D-01	2.086037D-01	5.686635D-02	-1.923791D+00
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-1.409347D-03	1.537447D-02	3.401118D-01	-8.180662D-02
4.197540D-03	-9.803618D-01	-1.144409D-03	1.336119D-02
-7.304117D-03	-2.181204D-01	1.337379D-01	-2.324973D-02
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
4.726437D-01	-1.421712D+00	3.190994D-02	3.689697D-01
-9.412483D-02	-2.770692D-01	9.732917D-01	-2.996086D-01
-1.802902D-02	-2.192801D-01	2.287856D-01	-5.738817D-02
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
-1.687528D-02	-7.206483D-01	-3.379679D-02	4.616933D-02
-5.730172D-03	5.823002D-02	3.636464D-01	-1.823971D-02
4.146090D-03	-4.803877D-02	-6.471286D-02	1.319741D-02
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
-9.912096D-03	3.679038D-05	4.094527D-02	7.559261D-03
1.336912D-03	-1.517178D-01	1.043831D-02	4.255523D-03
5.115134D-04	-4.264534D-02	1.241027D-01	1.628198D-03

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	0.521D-05	0.367D-02	0.648D-04	0.213D-03	0.105D-02	0.396D-01
CTR	0.484D-05	0.341D-02	0.642D-04	0.204D-03	0.143D-02	0.373D-01
CHF	0.216D-05	0.152D-02	0.307D-05	0.977D-05	0.234D-03	0.158D-02
CHR	0.148D-05	0.105D-02	0.311D-05	0.988D-05	0.640D-04	0.182D-02
AlF	0.877D-03	0.618D+00	0.279D-03	0.887D-03	0.376D-01	0.185D+00
AlR	0.886D-03	0.624D+00	0.248D-03	0.788D-03	0.403D-01	0.182D+00
VFR	0.282D-01	0.199D+02	0.419D+00	0.133D+01	0.624D+01	0.160D+03
VRR	0.259D-01	0.182D+02	0.379D+00	0.121D+01	0.839D+01	0.157D+03
LF			0.137D+02	0.436D+02		
DF			0.166D-30	0.528D-30		
NF			-0.548D+02	-0.174D+03		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.331D-05	0.105D-04	-0.190D-03	-0.611D-04	0.465D-02
CYR	0.170D-05	0.541D-05	0.132D-03	-0.128D-04	0.343D-02
B1F	-0.222D-03	0.705D-03	-0.348D-01	-0.486D-02	-0.334D-01
B1R	-0.168D-03	0.535D-03	-0.371D-01	-0.136D-02	0.755D-02
YF	-0.391D+02	-0.124D+03			
LF	0.352D+02	0.112D+03			
NF	0.156D+03	0.498D+03			
CTF					0.426D-02
CTR					-0.457D-02

FORCE = 0.241446D+07

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CASE 19

X	BICF	BICR	OMEGAF	OMEGAR
Z	0.0	0.0	0.0	0.0
M	0.0	0.0	0.0	0.0
Y	0.0	0.0	0.0	0.0
L	0.0	0.0	0.0	0.0
N	0.0	0.0	0.0	0.0
CTF	0.0	0.0	0.0	0.0
CTR	0.0	0.0	0.0	0.0
CHF	0.0	0.0	0.0	0.0
CHR	0.0	0.0	0.0	0.0
AIF	0.0	0.0	0.0	0.0
AIR	0.0	0.0	0.0	0.0
VFR	0.0	0.0	0.0	0.0
VRR	0.0	0.0	0.0	0.0
QF	0.0	0.0	0.0	0.0
QR	0.0	0.0	0.0	0.0
	QFU	QFP	QFDELB	QFDELTAC
	QFV	QFQ	QFDELS	QFBETA
	QFW	QFR	QFDELR	QFALPHA
	-0.738D-03	0.760D+00	0.573D+00	0.118D+01
	0.700D-02	0.147D+01	-0.206D-01	0.223D-01
	-0.102D-01	-0.262D+00	-0.316D-01	-0.324D-01
	QRU	QRP	QRDELB	QRDELTAC
	QRV	QRQ	QRDELS	QRBETA
	QRW	QRR	QRDELR	QRALPHA
	0.948D-03	0.324D+00	-0.473D+00	0.958D+00
	-0.265D-02	0.128D+01	-0.121D-02	-0.843D-02
	0.557D-04	0.288D+00	0.248D-02	0.177D-03

V	RC	GN	RHO	XF	LW
FE	ALPHA	ALFF	THETA	LF	LW
1.50000D+01	0.0	1.75000D+04	2.37800D-03	2.044080D+03	
4.40000D+01	-9.00000D+01	-9.00000D+01	6.108398D+00	1.026858D+04	
VTF	CGF	BETAF	PSI	XR	LW
VTR	CGL	PHI	GAMMA	LR	LW
7.050000D+02	3.809958D+01	-9.000000D+01	9.000000D+01	2.992284D+03	
7.050000D+02	0.0	-3.201399D+00	0.0	7.135254D+03	
THEOF	AICF	B1TF	BICF	DFW	
THEOR	AICR	B1TR	BICR	LFFW	
1.523895D+01	-2.278796D-01	-2.500000D+00	-2.500000D+00	7.335149D+02	
1.403871D+01	-7.709203D-02	-2.500000D+00	-2.500000D+00	-2.430483D-12	
THETAC	DELTAB	DELTAS	DELTAR	DELTAC	
1.463883D+01	9.391539D-01	-5.509738D-02	-6.501794D-02	5.921575D+00	
TF	HF	YF	MHF	LHF	
TR	HR	YR	MHR	LHR	
1.045993D+04	4.604014D+02	7.252347D+01	1.463425D+03	2.052571D+02	
7.729167D+03	3.543829D+02	-9.804548D+01	1.659024D+03	-4.183470D+02	
QF	LFZ	YFY	LF	RHPF	
QR	DFX	MF	NF	RHPR	
1.92611D+04	-7.335149D+02	8.042285D+02	-7.238057D+02	8.508310D+02	
1.288031D+04	2.137994D-30	2.934060D+03	-3.216914D+03	6.474596D+02	
XR	L/DE	SHPTOT	WFF	NMLB	
1.810721D+04	1.054759D+00	1.598291D+03	1.599291D+03	9.379158D-03	
SIGOF	CISF	CPSF	AMTF	LAMDAF	
SIGOR	CTSR	CPSR	AMTR	LAMDAR	
5.841923D-02	7.447102D-02	4.705879D-03	6.501849D-01	-4.883967D-02	
5.841923D-02	5.472988D-02	3.581048D-03	6.542912D-01	-4.723369D-02	
MUF	VF	DFFR	DFF	A0F	
MUR	VR	DFRF		A0R	
3.588068D-02	2.821488D+01	3.756411D-01	1.359629D+00	4.089287D+00	
3.587999D-02	2.129208D+01	2.259017D-01		2.936068D+00	
A1F	B1F	BETA0F	B180F	A270F	
A1R	B1R	BETA0R	B180R	A270R	
3.113827D-01	-2.379746D+00	3.769983D+00	4.393776D+00	4.434141D+00	
6.609410D-01	2.699229D+00	2.267934D+00	3.589548D+00	3.351089D+00	
CAPVF	ALPHAF	BETAFN	AT1PF	BPTPF	
CAPVR	ALPHAR	BETARW	AT1PR	BPTPR	
2.604537D+01	-1.377851D+01	2.694727D+02	2.608114D+02	2.400031D+00	
2.799682D+01	-2.537670D+01	2.696107D+02	2.636609D+02	2.778971D+00	

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMIF	CTFP	A90F	
RMTR	CTRP	A90RA	
6.083401D-01	7.280049D-02	3.479050D+00	
6.054137D-01	5.058635D-02	2.375439D+00	

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	NFF	RP
0.0	8.508310D+02	1.598291D+03	9.379158D-03
0.0	6.474596D+02	1.599291D+03	1.641353D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

V	RC	GN	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
1.500000D+01	0.0	1.750000D+04	2.378000D-03	1.957843D+03
4.400000D+01	-9.000000D+01	-9.000000D+01	6.082790D+00	1.028517D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	3.809958D+01	9.000000D+01	-9.000000D+01	2.973945D+03
7.050000D+02	0.0	2.822461D+00	0.0	7.145591D+03
THEOF	AICF	B1TF	BICF	DFW
THEOR	AICR	B1TR	B1CR	LFFW
1.518650D+01	-5.451046D-01	-2.500000D+00	-2.500000D+00	7.300243D+02
1.412000D+01	-1.763331D+00	-2.500000D+00	-2.500000D+00	-2.673540D-12
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.465325D+01	8.345028D-01	4.012108D-01	-4.888070D-01	5.932751D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.045870D+04	4.831349D+02	-2.404970D+02	1.692781D+03	-7.986220D+02
7.732356D+03	3.383610D+02	-1.694714D+02	1.472178D+03	-8.158301D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.670172D+04	-7.300243D+02	-7.937648D+02	7.143883D+02	8.395519D+02
1.309817D+04	2.127820D-30	2.920097D+03	3.175059D+03	6.584106D+02
XR	L/DE	SHPTOT	WFF	NMLB
1.811096D+04	1.055451D+00	1.597963D+03	1.598963D+03	9.381083D-03
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LANDAR
5.841923D-02	7.423176D-02	4.643495D-03	6.546108D-01	-4.868189D-02
5.841923D-02	5.472676D-02	3.641617D-03	6.507595D-01	-4.709863D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
3.589327D-02	2.826831D+01	3.759668D-01	1.358471D+00	4.074848D+00
3.589274D-02	2.134081D+01	2.260699D-01		2.942305D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
1.274590D+00	2.759912D+00	2.762457D+00	5.337434D+00	4.579582D+00
-1.338954D+00	-2.383075D+00	4.276866D+00	1.599755D+00	3.223801D+00
CAPVF	ALPHA F	BETA F W	ATIP F	BP T F F
CAPVR	ALPHA R	BETA R W	ATIP R	BP I P R
2.601537D+01	-1.342252D+01	9.046189D+01	2.617746D+02	3.040015D+00
2.794362D+01	-2.510235D+01	9.034106D+01	2.616610D+02	2.733467D+00

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMIF	CTFP	A90F	
RMIR	CTRP	A90RA	
6.038117D-01	7.291810D-02	3.305637D+00	
6.095667D-01	5.065964D-02	2.538034D+00	

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NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
0.0	8.395519D+02	1.597963D+03	9.381083D-03
0.0	6.584106D+02	1.598963D+03	1.641689D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

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V	RC	GM	RHO	XF LW
FE	ALPHA	ALFF	THETA	LF LW
3.000000D+01	0.0	1.750000D+04	2.378000D-03	7.143496D+02
4.400000D+01	-9.000000D+01	-9.000000D+01	6.157161D+00	1.063301D+04
VTF	CGF	BETAF	PSI	XR LW
VTR	CGL	PHI	GAMMA	LR LW
7.050000D+02	3.809958D+01	9.000000D+01	-9.000000D+01	1.138160D+03
7.050000D+02	0.0	4.712479D+00	0.0	7.880725D+03
THEOF	AICF	B1TF	BICF	DFW
THEOR	AICR	B1TR	BICR	LEFW
1.438781D+01	-2.631486D-01	-2.500000D+00	-2.500000D+00	1.175681D+03
1.345320D+01	-2.166545D+00	-2.500000D+00	-2.500000D+00	-2.870435D-12
THEIAC	DELTAB	DELTAS	DELTAR	DELTAC
1.392050D+01	7.313053D-01	6.295348D-01	-5.347334D-01	5.364731D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.064546D+04	4.954656D+02	-3.084490D+02	1.796678D+03	-9.915280D+02
7.955244D+03	3.396045D+02	-1.557565D+02	1.368281D+03	-7.798232D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.383317D+04	-1.175681D+03	-1.278334D+03	1.150500D+03	6.953572D+02
1.143556D+04	6.853576D-30	4.702725D+03	5.113334D+03	5.748357D+02
XR	L/DE	SHPTOT	WFF	NMLB
1.851857D+04	-4.800813D+00	1.370193D+03	1.371193D+03	2.187876D-02
SIGOF	CTSF	CPSF	AMTF	LAMDAF
SIGOR	CTSR	CPSR	AMTR	LAMDAR
5.841923D-02	7.563652D-02	3.845965D-03	6.769270D-01	-3.853600D-02
5.841923D-02	5.666303D-02	3.179371D-03	6.732960D-01	-3.644652D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF	AOR	AOR
7.163392D-02	2.139747D+01	2.514379D-01	9.031877D-01	4.077570D+00
7.163091D-02	1.617884D+01	1.025182D-01		2.980760D+00
AIF	BIF	BETAOF	B180F	A270F
AIR	BIR	BETAOR	B180R	A270R
1.570298D+00	2.940061D+00	2.454613D+00	5.617758D+00	4.947742D+00
-1.288504D+00	-2.209352D+00	4.227096D+00	1.671763D+00	3.530172D+00
CAPVF	ALPHA F	BETAFW	AT1PF	BPTPF
CAPVR	ALPHAR	BETARW	AT1PR	BPTPR
5.082948D+01	-6.508246D+00	9.077873D+01	2.620703D+02	3.333135D+00
5.138703D+01	-1.066246D+01	9.057502D+01	2.617115D+02	2.557632D+00

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CASE 20

XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	

RMIF	CTFP	A90F
RMTR	CTRP	A90RA
5.88188D-01	7.538417D-02	2.641559D+00
5.86566D-01	5.587147D-02	2.003912D+00

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
1.292448D+00	6.966496D+02	1.372443D+03	2.184291D-02
9.579059D-01	5.757936D+02	1.373443D+03	3.822510D+02

STABILITY DERIVATIVES OUTPUT

MASS	IXX	IYY	IZZ
5.439174D+02	1.499900D+04	1.139350D+05	1.079530D+05
XU	XP	XDELB	XDELTAC
XV	XQ	XDELS	XBETA
XW	XR	XDELR	XALPHA
6.512268D-03	2.656319D-01	6.858337D-02	7.678515D-01
-1.296059D-02	1.390379D+00	-1.040382D-01	-4.125484D-02
5.701877D-02	-1.320422D-01	-5.537102D-02	1.814964D-01
ZU	ZP	ZDELB	ZDELTAC
ZV	ZQ	ZDELS	ZBETA
ZW	ZR	ZDELR	ZALPHA
-5.774490D-02	2.790089D-01	7.470030D-02	-7.499608D+00
1.864727D-01	-1.299952D+00	9.187039D-01	5.935611D-01
-6.038312D-01	-3.014153D-02	-7.202571D-02	-1.922054D+00
MU	MP	MDELB	MDELTAC
MV	MQ	MDELS	MBETA
MW	MR	MDELR	MALPHA
-1.397986D-03	3.313460D-02	3.422684D-01	-8.307173D-02
4.125706D-03	-8.729392D-01	1.839293D-03	1.313253D-02
-7.369763D-03	-2.115314D-01	-1.311415D-01	-2.345868D-02
YU	YP	YDELB	YDELTAC
YV	YQ	YDELS	YBETA
YW	YR	YDELR	YALPHA
-4.700227D-01	-1.440972D+00	-1.159531D-01	-3.129825D-01
-7.714023D-02	-4.701143D-02	9.712887D-01	-2.455450D-01
2.160686D-02	-7.395062D-02	2.570291D-01	6.877678D-02
LU	LP	LDELB	LDELTAC
LV	LQ	LDELS	LBETA
LW	LR	LDELR	LALPHA
1.720588D-02	-6.579158D-01	-5.999890D-02	-5.323989D-02
-3.273958D-03	1.212401D-01	3.600708D-01	-1.042133D-02
-1.2255554D-03	5.084136D-03	-5.910927D-02	-3.901060D-03
NU	NP	NDELB	NDELTAC
NV	NQ	NDELS	NBETA
NW	NR	NDELR	NALPHA
9.873563D-03	-5.861850D-02	2.716342D-02	-8.826471D-03
1.470837D-03	-1.394042D-01	1.303282D-02	4.681821D-03
-2.195459D-03	-5.245290D-02	1.251049D-01	-6.988364D-03

LONGITUDINAL

	U	MU	W	ALPHA	Q	THETAC
CTF	0.717D-05	0.506D-02	0.667D-04	0.212D-03	0.907D-03	0.395D-01
CTR	0.659D-05	0.465D-02	0.643D-04	0.205D-03	0.125D-02	0.373D-01
CHF	0.227D-05	0.160D-02	0.332D-05	0.106D-04	0.237D-03	0.193D-02
CHR	0.156D-05	0.110D-02	0.274D-05	0.871D-05	0.769D-04	0.150D-02
AIF	0.881D-03	0.621D+00	0.282D-03	0.899D-03	0.355D-01	0.190D+00
AIR	0.855D-03	0.603D+00	0.247D-03	0.788D-03	0.328D-01	0.177D+00
VFR	0.604D-01	0.285D+02	0.418D+00	0.133D+01	0.575D+01	0.160D+03
VRR	0.364D-01	0.257D+02	0.378D+00	0.120D+01	0.752D+01	0.157D+03
LF			0.136D+02	0.432D+02		
DF			0.167D-30	0.530D-30		
NF			-0.543D+02	0.173D+03		

LATERAL-DIRECTIONAL

	V	BETA	P	R	AIC
CYF	-0.150D-05	0.478D-05	-0.195D-03	0.390D-04	0.470D-02
CVR	0.155D-05	0.494D-05	0.132D-03	0.227D-04	0.333D-02
BIF	0.103D-03	0.328D-03	0.364D-01	0.817D-02	0.443D-02
BIR	0.528D-04	0.168D-03	0.356D-01	0.298D-02	0.279D-01
YF	-0.346D+02	0.110D+03			
LF	0.311D+02	0.991D+02			
NF	0.138D+03	0.440D+03			
CTF					-0.425D-02
CTR					0.460D-02

FORCE = 0.241446D+07

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CASE 20

X	BICF	BICR	OMEGAF	OMEGAR
Z	0.0	0.0	0.0	0.0
M	0.0	0.0	0.0	0.0
Y	0.0	0.0	0.0	0.0
L	0.0	0.0	0.0	0.0
N	0.0	0.0	0.0	0.0
CTF	0.0	0.0	0.0	0.0
CTR	0.0	0.0	0.0	0.0
CHF	0.0	0.0	0.0	0.0
CHR	0.0	0.0	0.0	0.0
AIF	0.0	0.0	0.0	0.0
AIR	0.0	0.0	0.0	0.0
VFR	0.0	0.0	0.0	0.0
VRR	0.0	0.0	0.0	0.0
QF	0.0	0.0	0.0	0.0
QR	0.0	0.0	0.0	0.0
QFU	QFDELTAC	QFDELTAC	QFDELTAC	QFDELTAC
QFV	QFBETA	QFBETA	QFBETA	QFBETA
QFW	QFALPHA	QFALPHA	QFALPHA	QFALPHA
-0.116D-02	-0.102D+01	0.560D+00	0.115D+01	0.115D+01
-0.655D-03	0.138D+01	0.240D-01	-0.209D-02	-0.209D-02
-0.119D-01	-0.595D+00	0.358D-01	-0.379D-01	-0.379D-01
QRU	QRDELTAC	QRDELTAC	QRDELTAC	QRDELTAC
QRV	QRBETA	QRBETA	QRBETA	QRBETA
QRW	QRALPHA	QRALPHA	QRALPHA	QRALPHA
0.356D-03	0.390D+00	-0.490D+00	0.989D+00	0.989D+00
-0.264D-02	0.128D+01	-0.178D-02	-0.839D-02	-0.839D-02
0.191D-02	0.372D+00	0.378D-02	0.607D-02	0.607D-02

V	RC	GM	RHO	XF LM
FE	ALPHA	ALFF	THETA	LF LM
4.500000D+01	0.0	1.750000D+04	2.378000D-03	1.514094D+03
4.400000D+01	-9.000000D+01	-9.000000D+01	6.566357D+00	1.101781D+04
VTF	CGF	BETAF	PSI	XR LM
VTR	CGL	PHI	GAMMA	LR LM
7.050000D+02	3.809958D+01	9.000000D+01	-9.000000D+01	1.506823D+03
7.050000D+02	0.0	9.864825D+00	0.0	8.406756D+03
THEOF	AICF	B1TF	BICF	DFW
THEOR	AICR	B1TR	BICR	LEFW
1.468093D+01	-7.144863D-01	-2.500000D+00	-2.500000D+00	2.423031D+03
1.417545D+01	-3.007956D+00	-2.500000D+00	-2.500000D+00	-2.957925D-12
THETAC	DELTAB	DELTAS	DELTAR	DELTAC
1.442819D+01	3.955230D-01	7.678818D-01	-7.999095D-01	5.758288D+00
TF	HF	YF	MHF	LHF
TR	HR	YR	MHR	LHR
1.110955D+04	5.122576D+02	-5.466411D+02	1.882598D+03	-1.663858D+03
8.533569D+03	3.496600D+02	-1.974036D+02	1.254199D+03	-9.405778D+02
QF	LFZ	YFY	LF	RHPF
QR	DFX	MF	NF	RHPR
1.448340D+04	-2.423031D+03	-2.634593D+03	2.371134D+03	7.280428D+02
1.321640D+04	1.765617D-29	9.692124D+03	1.053837D+04	6.643539D+02
XR	L/DE	SHPTOT	WFF	NMLB
1.955431D+04	-1.998995D+00	1.492397D+03	1.493397D+03	3.013265D-02
SIGOF	CISF	CPSF	AMTF	LAMDAF
SIGOR	CISR	CPSR	AMTR	LAMDAR
5.841923D-02	7.840500D-02	4.026747D-03	6.996324D-01	-4.217234D-02
5.841923D-02	6.027138D-02	3.674489D-03	6.950612D-01	-4.095321D-02
MUF	VF	DFFR	DF	AOF
MUR	VR	DFRF		AOR
1.062597D-01	1.589092D+01	2.336728D-01	7.698390D-01	4.248841D+00
1.062398D-01	1.225383D+01	8.280102D-02		3.225905D+00
AIF	BIF	BETAOF	B18OF	A27OF
AIR	BIR	BETAOR	B18OR	A27OR
2.613838D+00	3.134288D+00	1.588894D+00	6.808222D+00	5.793054D+00
-1.570095D+00	-2.004053D+00	4.770392D+00	1.616741D+00	4.413167D+00
CAPVF	ALPHAF	BETAFW	ATIPF	BPTPF
CAPVR	ALPHAR	BETARW	ATIPR	BPTPR
7.618017D+01	-1.046473D+01	9.164120D+01	2.631138D+02	4.081165D+00
7.672001D+01	-1.250813D+01	9.121199D+01	2.614299D+02	2.545865D+00

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XFF	ZFF	MFF	TP
LFF	YFF	NFF	
0.0	0.0	0.0	0.0
0.0	0.0	0.0	
RMTF	CTFF	A90F	
RMTR	CTRP	A90RA	
5.584031D-01	7.811224D-02	2.339550D+00	
5.650860D-01	5.960083D-02	1.922366D+00	

NON UNIFORM DOWNWASH POWER CORRECTIONS

DELHPF	RHPF	SHPTOT	NMLB
DELHPR	RHPR	WFF	RP
3.536580D+00	7.315793D+02	1.498632D+03	3.000737D-02
2.698465D+00	6.670524D+02	1.499632D+03	5.251289D+02

STABILITY NOT CALCULATED FOR THIS CASE, SKIPPING TO NEXT CASE

NADC-81118-60

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